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NEW WORLDS

SCIENCE FICTION

APRIL 1960

VOL. 1

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DOGFIGHT

by JAMES WHITE



Into the gigantic task force assembling on the fringe of the Sirius system had gone the resources of seven inhabited worlds, and still it was not big enough. Captains, sub-fleet Commanders and all the way up the pyramiding chain of command, men drove themselves mercilessly to the limit of endurance and beyond, one eye always on the clock. This which was being asked of them could not be done, they swore. More particularly, it could not be done in *time*; the problem of liaison and supply, the mountain of organisational detail involved in merely assigning positions made the task impossible. It couldn't be done, they persisted angrily while they strained every nerve and muscle in their bodies doing it.

For the directive had *Maximum effort* . . .

Precisely on the calculated second, though still frantically engaged in sorting itself into proper battle order, the great fleet moved off. Mighty capital ships over half a mile in length, massed echelons of cruisers and a veritable cloud of lighter stuff all slipped as one into hyperspace and shot away on their allotted course. Each ship of the fleet was now at the centre of a small, self-created and highly artificial

continuum where reaction was out of all proportion to action and matter was not held down to the limiting speed of light.

Hours and days passed, then weeks, and the fleet—still at maximum acceleration and below the required strength—plunged onwards. But its numbers were being augmented now by units sent by planets adjacent to its course. It did not matter that whole worlds were drained of war resources or that planetary populations had worked night and day to put them there—they were there, on course and on time, that was the important thing.

On the Flagship, logistic problems of enormous proportions were being broken down into handy, manageable sizes. Supply and maintenance vessels were already following in their wake and this supply line had to be protected. The fleet continued to grow, but at a slower rate as units were detached to neutralise the few enemy positions nearby which were a potential threat. When the growth finally ceased its make-up and numbers were exactly as ordered in the Directive from the tactical computer, and the point in time and space where its headlong dash was to end was only hours away.

As yet nobody had any idea what to expect when they got there.

Morale was high, however. The men were confident that RK9—the official designation for the tactical computer at Headquarters—would take good care of them. RK9 knew her stuff; whether this present mad dash was a surprise move to end the war or a step intended to counter an attempted breakthrough by the enemy, the battle computer would have the moves worked out well in advance. Unlike some of the electronic brains used in the opening decades of the war, when every major battle was such a bloody shambles that the victors could not honestly say that they had won, RK9 was mindful of the men inside the ships she moved around. And something very like this had happened some eighty years ago when RK9 had just come into operational service, a piece of brilliant anticipation and bold strategy which had turned the tide of the war.

But despite their trust in the giant electronic brain, their knowledge that it would not wantonly throw away their lives, they knew that war was still a risky business. As the tremendous battlefleet hurtled onwards many of them wondered if they would live to see many more days.

Henson knew that the single moon of Earth was the most heavily defended body in all the vast volume of space under human control, and the whole of that incredibly complex and efficient defence system of ships, missiles and long-range detectors was centred around the crater Harpalus. It was as if some early planner had arrived at a figure in men and materials which could protect it against any conceivable attack, and then multiplied everything by three. Within this fantastically thorough network of defence there came into operation protective measures of a less material sort; hundreds of shrewd, hard-eyed but unobtrusive security officers whose purpose was to deal with any possible attack from within. And the reason for it all lay in a series of chambers half a mile below the crater floor in which were housed the near-legendary battle computer RK9 and the offices of General Craig, Director of Strategy.

As the newly-appointed aide to the General, Henson thought sourly, he should have been in a uniquely favourable position for an enemy agent . . .

Looking across the ante-room at the sound-proofed door of Craig's office, Henson decided that there was definitely something going on—or more accurately, that something was going *wrong*. Shawcross, the senior officer in charge of Materials and Personnel, was with the General at the moment. He had gone barging into Craig's office without so much as a nod. "It's happened again!" he had shouted angrily; and "That unprintable thing will have to be destroyed, do you hear! We can't have a—" The door had slammed behind him at that point, leaving Henson to the realisation of how near he had been to learning something of importance.

Presently the door opened and Shawcross came out, closely followed by Craig. Looking at the face of the Materials and Personnel man Henson was reminded of the evolutionary pattern of a main sequence star—when Shawcross had gone in his thin, intense face had been red and swollen with anger, which had now condensed to a tight, white-hot fury. He left without speaking. General Craig stared after him for several seconds, looking worried, then turned to Henson:

"I've a job for you, Colonel," he said, and paused. His tone was harsh but not deliberately offensive, the one used when he had a lot

on his mind and was trying to disguise the fact. He went on, "We have made a penetration in force and the prisoners are becoming a problem. Go out there and handle things—you've been cleared for all data on the operation and you can have the subsidiary computer for the next two hours to work out the details. All right?"

"Yes, sir," said Henson briskly, desperately trying to hide his feeling at the news that he was about to be pulled out of the centre of things just when some sort of crisis was impending. But like the eager and patriotic young officer that he was trying to portray he added, "The operation, sir, was it a success?"

"So far, yes—it was a surprise move." The General gave a short, unmirthful laugh, turned and re-entered his office. He left Henson with the odd feeling that the operation had been a surprise to everyone concerned, including the Director of Strategy.

Definitely, he thought, there was something here which could be exploited to the advantage of his hard-pressed race. If only he knew what it was.

Next day the being who called himself Colonel Richard Henson was at the controls of a one-man courier vessel en route to his latest assignment. It was on rare occasions such as this, when the eyes of Security men, his fellow Earth officers or even the Human man-in-the-street were off him, that he was able to relax and become himself. Strangely, this was not a wholly pleasant process, he had discovered; it felt almost as if the real him was the character in the play—a character strangely lacking in depth, whose background was hazy in places and whose lines he did not know very well—and the Henson role the reality.

For it was not a nice thing to be a Semran undercover agent, and a member of a culture which was steadily losing an interstellar war with Earth.

At times like this he found his mind trying to slip into one of the many worlds of might-have-been. If a little more diplomatic oil had been introduced one hundred and thirty years ago when the two cultures had met; properly used it could have caused the mutually abrasive surfaces to acquire a smooth, cool polish instead of leaving them hot and raw. Or if the Semra had retained their technological lead, or if

the Humans had not developed RK9 . . .

As a culture Semra had been old, highly advanced and intensely conservative, that of Earth young and on the brink of interstellar expansion with all that had implied. At first the war—the great, sprawling, unwieldy and *slow* war—had gone in favour of the Semrans. Semra was superior in ships, in men trained to work them and in the speed and efficiency of the tactical computers which fought all her battles. Then gradually the Humans had built and improved on their calculators until a deadlock had been reached. Battles continued to be won and lost, but only by the narrowest of margins. Thinking of those terrible encounters, of what he had heard and read and just imagined about them, Henson cringed.

The war had been a murderous chess game then, with the opposing battle computers—cold, logical and unfeeling machines bent only on winning the game no matter if it meant practically clearing the board to do it—as players and the Human and Semran beings concerned as unimportant and worthless pawns. Every engagement resulted in a massacre for both sides, the advantages lost or gained being microscopic. The ensuing deadlock had been broken only when the Earth forces had begun using RK9, and it had been at that point that Semra started losing the war:

Staring unseeingly at the controls before him—switched to automatic now to allow him to concentrate—the Semran agent began to feel the gnawings of self-doubt. So much depended on him now. The Semran High Command had early realised that the Earth successes were due solely to the new calculator. If the circuitry or working principles of that genius among computers could be copied and given to them, or if the RK9 computer could be destroyed or sabotaged in some fashion, then the defeat looming inevitably before them might be staved off until some more positive action could be taken. That was why, driven by a desperate High Command, Semran Intelligence had contrived to train, mould and almost kill one of their agents in a last-ditch attempt to place one of their people next to Earth's super calculator.

On Earth Richard Henson had been a brilliant student and a more than adequate cybernetics engineer. With a highly technical war being waged it was only natural for him to join the fighting forces as a com-

putorman, gain promotion and eventually attain to the position he craved. And once there what had happened? He had been sent off on an errand half across the Galaxy!

But was this assignment merely a piece of bad luck, he wondered suddenly, or were the Earth Security people on to him? He knew that he had been given a background that was solid and well documented and the physiological differences, which were very few and minor, had been removed by traceless surgery. But a single slip could have negated all that. His mind was drawn into a tightening, descending spiral of despair for his race and himself until it reached the state where he was on the point of giving up and setting course for the nearest Semran-held world.

Angrily he curbed these traitorous impulses and began forcing himself into the Henson character again. Henson was a happier and more positive person, and he had a lot of preparatory work to do before the end of the trip. Almost gladly, Henson plunged into it.

The planets overrun by the latest Earth penetration were outpost worlds of little importance and so lightly held that they offered no opposition to the overwhelming force of the enemy—Semra, although brave enough, were very practical. But when Henson reached his destination—a point in space approximately two-thirds of the way along the Earth line of advance, which was the centre of organisation for Supply and Maintenance—he found that the prisoners were already piling up fast. The total personnel of the thirty-odd outposts taken over, even though they had been lightly defended, came to a respectable figure. The Admiral commanding this advance supply base had, as well as the normal worries of his position, the problem of feeding and keeping control of over five thousand prisoners of war with inadequate supplies of food or men to guard them. Henson's arrival was a great relief to all concerned.

"We have transports already on the way from Earth which should arrive in a day or two," Henson told the senior Admiral immediately the introductions were over, "and a place has been found for the prisoners. It would be a big help, however, if you could let me borrow some Computormen and guards until the others arrive . . . ?"

The Admiral agreed without hesitation. Even though the other's shoul-

ders sagged under their weight of gold braid—and responsibility—and Henson bore the relatively minor rank of Colonel, agreement was merely a matter of form because behind and above that Colonel's insignia loomed the awful majesty of RK9.

"In that case," said Henson smiling, "we'll have the prisoners out of your hair in no time at all." The Admiral's hair was going thin, but just enough for him to take the words as a compliment rather than a crack. He went on, "But I wonder, sir, if I could ask a question. Back on Luna the Security is so tight that we never know what the Big Brain is thinking until long after whatever she has planned is finished. Could you tell me how this current job is going?"

The Admiral was silent for a long time, then he said brusquely, "I honestly don't know. It seems to be going well, but how can one judge the degree of success when the objective of the operation is unknown . . . ?"

This Admiral, thought Henson suddenly, is a man under considerable internal pressure. It was clear that there were a lot of things which he wanted to get off his chest and, despite the danger that the things he would say might land even a man of his vast seniority into trouble, he was bent on saying them to someone who he thought could do something about it...

"... What sort of picture do the words 'penetration in force' give you?" the Admiral went on. "A great spearhead of ships and men plunged into the heart of enemy territory, disrupting supply routes, cutting communications and rolling everything before it?" He snorted. "Well that is not happening here."

"Maybe seventy or eighty years ago an offensive in this area would have done some good—one did, now that I remember—but the enemy has long ago retreated from this volume of space except for lightly defended positions which are little more than advance listening posts. Instead of a deep, potentially fatal wound we have therefore inflicted nothing but a long, shallow scratch. And to make this scratch, to collect this super task force, we have had to practically strip a whole galactic region of defence!"

Some sort of reaction seemed to be expected of him at this point, Henson thought. He said, "Er, what are they doing now, sir?"

"Nothing!" the Admiral barked. "Just nothing! Eighty thousand units big and small and all of them just waiting for something to happen. The job of supplying them alone . . ." He broke off and with a great effort brought his voice back to a conversational level. "An Emergency Directive calling for maximum effort sent us out here and so far there have been no further orders from RK9 or anyone else. Now we both know that there have been times when fleets were moved suddenly without their personnel being in the picture, but they were always informed of their place in that picture very shortly afterwards. This time we know nothing at all. And what is worse, I've begun to hear of other, and admittedly smaller, instances just like this one."

When the Admiral had begun speaking Henson had been prepared to hear him blow off a little personal steam, but now it was clear that the other was a seriously worried man. He was also beginning to realise that perhaps it had been a piece of rare good fortune being sent out here by Craig—he was finding out things that he would never have discovered on Security-blanketed Luna. And it was important information, too, so important that it was all Henson could do to hold the grave expression on his face while the Admiral continued talking.

"The fact that this movement has left a region open to enemy attack is bad enough," he went on, "but what is worse is the way some of the men are beginning to feel about RK9. They trust her, of course—she still wins battles, looks after their safety by winning with the minimum of casualties, and so on. These men are of the opinion that this operation was a move to anticipate one by the enemy, and that because they have not shown up the enemy has been outsmarted and the operation is therefore a success. But some of them, the more informed ones, are beginning to have doubts. Among other things they are wondering if perhaps the Semra have developed a calculator which is as good, or maybe better, than ours. . . ."

When Henson left the Admiral a few minutes later, after assuring him that he would bring all these points to the attention of General Craig, he had to fight to keep from shouting with sheer exultation. He now had proof that something was definitely wrong with the much-vaunted tactical computer of the Earth forces, so much so that Human morale was becoming affected. And large volumes of Earth territory

were undefended through this peculiar malfunctioning of RK9. This was the sort of information which could win wars. It might win this one for the Semra.

During the three days it took for the transports to arrive, Henson worked furiously, striving to shorten if only by hours the time it would take for him to complete his assignment and return to Luna and RK9. The immediate problems demanding solution were those of storage: where to put the erection machinery which had to produce temporary shelters for five thousand Semran prisoners, the vast number of agricultural and associated mechanisms which would render them self-supporting, and the tremendous quantities of food needed to keep them alive until that time would come about. The agricultural material was the worst headache because it had to be of the old-fashioned plough and tractor type—big, awkward, cranky things whose power source had to be the internal combustion engine rather than the lighter and more handy atomics, because that way there was less chance of ploughshares being turned into swords. And there had to be a necessary surplus allowed in some categories, mainly where medical supplies were concerned, because the prison population might be added to by further captures as well as the increase which would take place normally with the passage of time.

In the very rare moments when such pressing matters did not occupy his mind Henson would dream a little. In these hurried but vivid day-dreams he would discover and make available to the Semran High Command some terrible flaw in Earth's war machine, of such importance that the whole trend of the present conflict would immediately swing over in favour of the Semra. In practically no time Earth would be forced to sue for peace and if he, the Semran Intelligence officer who had brought it all about, had any say in the matter those terms would not be too harsh.

For Earth was a ruthless, but never needlessly cruel, enemy—their P.O.W. system in particular was extremely humane, *and* highly economical to boot! And the differences between Semra and Earth, especially to a person like himself with wide experience of both sides' points of view, were not great . . .

The beautiful dream would usually be interrupted by a harried computorman waving papers and protesting that there had been no provi-

sion made for seed storage—that Hold J-107, the space normally used for this purpose, had been converted into extra living quarters and the only other possibility, B-82, was being used for the milk and meat animals, all of whom would just *love* to get at that grain, and had the Colonel any suggestions?

But finally the transports arrived, were loaded and set off with a destroyer flotilla as escort. Between them the transports contained nearly two thousand prisoners together with security men and ecology experts. The operating crew, as was usual on unarmed and highly servo-mechanised ships of that type, numbered less than twenty and their quarters were much more spacious and well-appointed than on the fighting ships. Henson's next most important job being the talk with the senior Semran prisoners, he asked the ship's Captain for the loan of that worthy's cabin. Just, he had joked, so that he would make a good last impression.

On the tenth day after leaving the advanced supply base Henson had the three senior prisoners brought to him.

He made his manner polite but slightly distant when he greeted them and offered seats, but it was not until he was seated himself that he recognised Harelfia and saw that his old-time friend knew him . . .

"I am Colonel Henson," he announced quietly, and while the Semrans exchanged their names and rank with him he studiously looked right through Harelfia. Harelfia, who was no fool, did exactly the same with him. He went on, "Some of you may have heard rumours of how Earth deals with her prisoners of war, rumours which say that because no trace can be found of any Semran once he has been taken prisoner that we do not take prisoners. Well, I can assure you that this is not so. We do take prisoners, though what we do with them will come as a shock to you."

Henson smiled, then continued, "But before I tell you your fate a little background information might help you to understand what is to happen. . . ."

Since the time more than six decades before when the forces of Earth had unquestionably gained the initiative in the war, the prisoner problem had increased to fantastic proportions. As the war progressed millions of men and vast quantities of war material were tied up merely in

guarding these prisoners. And, as might have been expected, cases of cruelty and malnutrition became more and more common because facilities for taking care of them were becoming increasingly strained. It was quickly reaching the point where the whole war effort was being affected by this hampering burden of prisoners. A solution had to be found, and it was.

"While you are on this ship," Henson went on, "you are prisoners bound to the rules of obedience and subject to the punishments of those who disobey. When you leave it, however, you will be free."

Henson paused and tried his smile again, but the three faces before him remained stony. They were not surprised because they just did not believe him.

"With you when you leave," he explained, "will go enough food, prefabricated shelters and agricultural machinery to start you off as a self-sustaining colony. We will leave you to do as you like with yourselves but, being intelligent beings, we know that you will work to stay alive. During the next ten or twenty years we will drop other 'prisoners' down to you and you will doubtless assimilate them into whatever form of culture you devise for yourselves—we will have no contact with you whatsoever nor will we try to guide your thinking in any way."

The startled looks were coming now, all right.

Henson said, "You can see the beauty of this idea, and the fact that it is workable only with a culture like the Semra where absolute equality of the sexes is the norm. Instead of having to feed, clothe and shelter our prisoners for the rest of their lives—and guard them—we allow them to do all these things for themselves. The original expense of setting you up as a colony is great, but not a patch on what the other way would be, and a few men at most will be sufficient for guard duty.

"Those few men will be in an orbiting spaceship," Henson concluded gently, "just in case some of you succeed in throwing together a spacecraft with which to take home news of the location of this planet-wide prison camp. I don't think this would be possible—the machinery being given you while usable is antiquated—but we try not to underestimate any being's ingenuity. The ship will have means of detecting and destroying any such attempt."

Up until then everything had been in Earth English—the Semra as a

race had little difficulty learning new languages compared with the Earth-men. But now the Semran officers were talking heatedly together in their own tongue, which Colonel Henson was not supposed to know. It took considerable effort to make his face register blank non-comprehension while they talked, often mentioning places and people he knew as well as they, although none of them were ever likely to see them again.

If only he could get Harelfia alone, he thought longingly, so that he could get some *news* . . .

"Your method of dealing with prisoners," burst out one of the trio suddenly in English, "is high-handed, unfair and . . . and selfish! Compared with our expense of maintaining camps for you humans—"

"Surely," put in Henson gently, "there are not all that many Earth-men captured these days."

The objector subsided and there was a silence which began to grow awkward. Henson stood up.

This, he reminded himself, was not Harpalus where Security men waited to jump at the slightest suspicion of odd behaviour. Besides, the guards on this ship were just that, not the trained psychologists and spy-hunters which clustered so thickly around RK9. Henson wanted badly to talk to Harelfia, and by Heavens he *was* going to talk to her, and right now!

He said, "That is all for the time being. When you have digested the information just given you I'm sure you will have questions. Well, my duty is to give you all the help possible short of allowing you to go home. At the moment, however, I would like to talk to one of you alone. Flotilla Leader Harelfia, perhaps . . . ?"

Harelfia nodded. "Kind of you," she said with just the right mixture of dryness and hostility, "not to phrase it as an order."

The same old Harelfia, thought Henson as the other two Semran officers and their guard left the cabin. It had been twenty-three years since he had seen the other, just before he had gone into training for the Henson role, and there was suddenly so much he wanted to say and so much he needed to know that his speech centres were paralysed through sheer overload. Finally he got out, "We can talk . . ."

And they talked. Henson was careful to avoid giving details about

himself because of the slight danger that Harelfia might let slip something to the other prisoners which in turn might be overheard by the guards. But the Flotilla Leader had no such curb on her tongue, and as she talked Henson gradually came to realise that this was not the Harelfia he had known of old at all—there was an air of cynical hopelessness about her that had nothing to do with capture and the prospect of life-long isolation on the P.O.W. planet. Only when she began talking about the war and its effect on the Semran population as a whole did the reason for it appear.

Dissatisfaction, despair and growing unrest; it was the picture of a culture which had been losing the war for so long that the thought of winning it would have been a totally alien concept. “. . . The space forces are maintained chiefly through a mixture of organisational inertia and a remaining vestige of racial pride,” Harelfia went on, an almost whining note becoming apparent in her voice which was also foreign to the Harelfia of old. “That is the situation behind us when we fight, and it’s hard to say whether it is the unquestionable superiority of Earth or this which affects us most. But we’re licked anyway, so long as that computer of theirs—”

“There are indications,” put in Henson carefully, “that RK9 may be losing her grip.”

“Some of us have thought that, too,” Harelfia agreed, “and although some of its actions recently have been strategically sense-free, we can’t take the chance of ignoring them. We don’t *dare*! The Earth battle computer is not greatly superior, mechanically, to our own. But its directive, its programming—it has a different angle of approach to a battle, as strange and difficult to understand as say, the Human’s emotional attraction and protective feelings which they feel towards females of their own species instead of reserving those instincts for their young as we do. We can never be sure that it isn’t contemplating some new and more devious strategy.

“The current operation, for instance,” Harelfia went on angrily, “has the appearance of being a colossal tactical blunder. Yet we can’t act on that assumption and hit back at the points where it has left Earth defenceless. Oh, if only we could . . .” A look of yearning had come to Harelfia’s despairing visage and for a moment her eyes shone at the

thought of Semran forces plunging through a gap in the Human armour and sweeping everything before them, rolling over the system of Sól and taking Earth itself, Luna and RK9. For a brief, glorious moment Harelfia saw victory, then she shook her head impatiently and continued, "Instead of that our whole defence system has been disrupted in our attempts to counter this very devious or very stupid move. And the more apparently senseless its actions are the more disorganisation and confusion it causes us. We can't trust it.

"The point has been reached," Harelfia concluded hopelessly, "where Earth's tactical computer could go completely mad, and they would still win."

Listening to Harelfia, Henson felt himself wanting desperately to wipe the sick hopelessness from the other's voice and expression. He wanted to tell her that as Colonel Henson he was Aide to Earth's Director of Strategy, who was the Human in charge of RK9. That he must very shortly be taken into Craig's confidence and that he would then know all there was to know about that unbeatable battle computer. Given information in advance he, Henson, would be able to pass it on to Semran agents on Earth—contacts who had escaped detection by security forces for the simple reason that they had remained completely inactive up until now. The sole duty of these agents was to collect and pass on information from Henson, but only when he had information which was worth passing. Very soon now he would have it, Henson wanted to tell her, and with a channel right into the heart of Earth's centre of planning the war would certainly swing back in favour of the Semra. So much so that unless some catastrophic piece of bad luck befell him in the near future, Semra would win the war. He longed to tell Harelfia all these things, but only one thing stopped him.

Kindness.

Harelfia was being exiled on a planet which was intended to become her home and the home of generations to come of Semran prisoners. For a while she and her comrades would be unhappy, but work and the pride they would take in forming a self-supporting community would tend to make them forget—and succeeding generations would forget completely the ideological difference which had caused them to be placed in the planet-wide prison which had become their home world.

But Henson had heard it said of a certain sub-species on Earth that they lost battles but won wars. It was not one hundred percent certain that the Humans would lose and that the conquering Semran forces, given the co-ordinates of the P.O.W. planets by the capitulating Earth, would seek out and release the prisoners. If he told Harelfia everything he knew and then something went wrong, if Harelfia was to spend the whole of her remaining life-time daily expecting a Semran force to rescue her, and with her the rest of the colony, that would be a torture too terrible to contemplate . . .

Gradually the realisation came to Henson that he had been quiet for a long time, and that Harelfia was looking at him intently. He said quickly, "I suppose you'd better be getting back to the others. I'll talk with you again soon, and with the others so as not to arouse suspicion among the guards—there will be a lot you will need to know about setting up the colony . . ." He trailed off into silence.

Harelfia nodded and turned to go, then hesitated. She said, "Our Intelligence people did a good job, Colonel. When you were explaining about the Earth P.O.W. system to us a few minutes ago you sounded truly enthusiastic about it, as if you were really convinced of the rightness of the whole thing. It makes me wonder . . ." She broke off to give Henson another long, searching stare, then added, "I hope you remember which side you're on."

Henson's first impulse was to laugh, his second to explain how thoroughly he had had to steep himself in his Human role; how he had had to strive to *be* a Human, in viewpoint, in manner and even in emotional reactions. If he had not done so he would never have arrived at his present position of trust. But somehow, Henson thought with a sudden feeling of discomfort, all these things would have sounded like a protestation, a lame excuse for some unexplained misdemeanour. In considerable turmoil of mind he watched Harelfia leave and said nothing.

During the work of establishing the colony and on the journey back Harelfia's words returned several times to his mind, bringing vague feelings of guilt. But with his arrival on Luna all these tenuous feelings were obliterated by larger and more immediate issues. Harpalus was seething with excitement over a battle which was expected shortly, and in his absence the situation between Generals Craig and Shawcross over

the computer had come to boiling point.

The row was going on in the outer office this time when Henson arrived to make his report, and it stopped as soon as he went through the door. General Craig's face was pale and there was a stubborn set to his jaw as he glared towards Shawcross, whose visage was growing visibly darker with suddenly pent-up emotion. The silence was electric.

Abruptly Shawcross wheeled about. "General Craig," he snapped, "kindly take this blasted Aide of yours into your confidence and tell him what's going on around here. Then notify Security so I can talk to you when he's hanging around here. That way the ignorant damn fool won't make me burst a blood vessel." He brushed past Henson, paused momentarily to growl, "My apologies, Colonel," then stamped out.

Henson's "Quite all right, sir," was to an empty doorway.

The Director of Strategy did not mention Shawcross at all during Henson's report and the subsequent discussion on it, despite the Colonel's repeated and obvious attempts to guide the conversation that way. Towards the end of it he said suddenly, "Colonel Henson, what is your feeling about this P.O.W. system? And don't say what you think will please me, say what you think!"

The General, Henson saw, was under a severe strain. He felt that Craig was seeking reassurance about something, some decision that the Director of Strategy had taken which even he himself was not sure was right. Henson saw the torment in the other's eyes and thought that of all the Humans he knew, he liked and respected this one the most. But he did not know enough to give the reassurance that was being sought, he could do only as he was told.

He said, "I approve of it. I think it shows some very sound thinking in high places. Normally at this stage on Earth, we would be an expanding culture, exploring, colonizing spreading from system to system. The war stopped that, but not entirely. The colonizing process is going on, with Semran prisoners, and the beauty of it is that they will have forgotten the war in a comparatively short time and be simply colonies waiting to be re-opened to interstellar flight."

Henson hesitated for an instant before going on. What he wanted to say verged on the disloyal, but he decided that the risk was worth taking by saying it because a little verbal disloyalty in a person who was in a

high position tended to disarm suspicion more than the other way about. He added, "The Galaxy is being populated and eventually it will be civilised—does it matter by whom? I think it is a very good system."

The General stiffened up suddenly. He said, "There are a lot of things you need to know about this job and I'm going to enlighten you. But not for a few hours yet. There is going to be a battle visible very shortly, one of the biggest, and I want you to watch it with me in the observatory. I'll be able to explain things better there.

"And if you're wondering about the little inquisition," he added, smiling, "it was because I think you a very able man and I was trying to make sure in advance whose side you would be on . . ."

Those, thought Henson after the General had gone, had been almost exactly the same words used to him by Hareifa. Both of them had admitted his ability but shown doubt regarding his loyalty. Was there, he wondered uneasily, some indefinable something about him which stamped him as a traitor?

Recently the temptation had been strong to sink himself completely in the Henson role and forget that he was a Semran agent—that would undoubtedly have been the easier and much more safe course. And in his present position and during his rise to it he was doing a lot to help Earth against his own people. That had been necessary for him to gain a position of trust, he had argued at the time, and the wrong he had done would be outweighed by the service he would render in the near future. Maybe the reason for his uneasiness—guilt was not too strong a word—was the fact that he liked this Henson characterisation so much, and that he sometimes felt pleasure in the job of prosecuting the war against his own people.

Craig's remark had to do with inter-departmental loyalties, Henson was sure, but it nevertheless could be a pointer towards some basic flaw in his make-up. Until the time came for him to go to the observatory he fought a continuous, bitter and unresolved struggle with his conscience.

From the viewpoint of an observer in the Solar System the battle was beginning to take shape in the area between the constellations of Cancer, Gemini and Orion, although the actual spatial co-ordinates of its position were nowhere near the stars composing those systems. Through the

naked eye it appeared as tiny tendrils, squiggles and fat worms of multi-coloured light all inching together towards a common centre somewhere in the region of Procyon, but with the aid of the equipment in the battle observatory, the details became apparent.

That equipment could give a picture—blurred and distorted, it was true, but still a usable picture—of markings on the surface of 61 Cygni C. It now projected images from the battle area which showed the fat worms and squiggles of light to be great fleets, sub-fleets and flotillas jockeying for position. It even showed the intermittent breaks in some of the ships' light as their Captains practiced the dodging out of and into hyperspace which was the most important manoeuvre in present-day warfare.

The ship's Light. . .

A vessel using hyperdrive created its own continuum around it and disappeared from normal space—but not quite. From the hyperdrive engines which propelled it through its artificially created spacetime there was an enormous amount of radiation leakage which spilled into normal space as light, a pure, almost solid mass of light so intense that it had to be counted in the order of billions of candlepower per second. Thus it was that even when a ship travelled in hyperspace, *especially* when a ship travelled in hyperspace, its position relative to normal space was always apparent because of its light. But light is a limiting velocity as well as a radiation phenomena and hyperships often exceeded that speed, so that their position as located by their light spillage was long out of date. Above him now, for instance, Henson knew that ships angling towards the battle area from the Solar System side were invisible because being nearer to him their trails of light had already passed, while vessels coming in from beyond it were likewise invisible because their light had not reached him yet.

But they were all drawing rapidly together, soon all their lights would be visible . . .

"That," said General Craig with a wave towards the observatory's transparent dome, "is the reason why we can't afford to relax even now. I doubt if the Semra are in a position to mount another such attack, but we can't be sure. The one we are seeing now, however, could have overrun the Solar System if we hadn't been able to move our defenders

out there in time. If it hadn't been for RK9 . . ."

Here it comes, thought Henson eagerly. He was going to find out something important at last. In an effort to hasten the process he said, "I know, sir, but what beats me is why the Semra haven't developed a computer equally as good. They have the brains."

"They have the brains, all right," Craig said. "But brains are not all that is needed, there is a little something extra required which they have not got; the proper type of emotion. The Semra are an old, intelligent and emotionless race, and whether they have simply evolved away from it or never possessed it I can't say—I just know that they are incapable of feeling emotion in anything like the degree that we do, and are therefore unable to duplicate RK9.

"But to understand properly," he went on, "you have to go back to the first battle calculators. R's 1, 2 and 3 were no good, we lost nearly every time with them. R4 was better, and with later models we improved until our computers were the equal of the Semran machines and we won—if you could call it that—about half the time. But you remember what it was like in those days . . ."

Henson could. Looking through the transparent dome above him he could imagine the same things happening to the Semran forces out there.

Interstellar war was a study in contradictions. Men and machines flew ships at speeds faster than light through two continua and yet were forced to use archaic chemical warheads on their missiles. This was because atomic devices of the cruder, less balanced kind—the kind known as mass destruction weapons—became explosively unstable when the ship carrying them ducked in and out of subspace a few times. Engagements were of necessity close-range, bloody affairs, yet fought at such speed and with such a fantastically large number of variations in any given tactical situation that mere beings of flesh and blood were unable to react fast enough to them.

A favourite tactic was for a single ship—or it could be modified for the use of a fleet—to approach an enemy through hyperspace to close range, materialise to launch a missile, then flee into the hyperdimension again. It did not matter if its intended victim was in normal space or the hyperdimension, because in the latter instance any missile directed into the point of emergence of the light spillage would ultimately destroy the ship. A missile directed thus would enter the artificially created

space around the target ship and remain there in stasis. But when the ship, after a long or very short time, emerged into normal space the missile would materialise inside it. Providing the problems of course and speed and timing could be solved it was a lovely tactic.

Increasingly complex battle calculators were designed to solve these problems. Each encounter became a sprawling, chaotic dogfight stretching over scores of light-years with the machines which handled the battle throwing units about like pieces in a monstrous game of chess in frantic attempts to attack and at the same time anticipate and counter an attack from an opponent. And the men inside those ships could do nothing whatever to help one way or the other. It was a battle of cold, unfeeling and inhuman machines . . .

The General was saying, “. . . It was like a game of skittles. Or chess. There was no identification between the computers and the men taking part, they were just so many expendable chess pieces, and the carnage was frightful. The computers were so evenly matched that . . . Well, what was perhaps worse than the casualties suffered in the actual battles was those who were not sure . . .”

Ships, thought Henson sickly, whose crews thought that a missile had found its way through their tail light during the battle, a missile which hung somewhere in the artificial continuum created by their hyperdrive generators, harmless until they tried to re-enter normal space. After a battle it had been a regular occurrence to see a ship come into its home system on hyperdrive only to blow itself apart on emergence. It was said that the personnel on the bigger ships stood a better chance because there was no telling where exactly in their ship the missile would materialise and if they distributed themselves about the ship some of them might survive—unless, of course, it materialised near the magazine . . .

There had been instances where whole fleets had come home, the blinding corruscation of their light proclaiming their desperation and their belief that they were under sentence of death, to disintegrate one by one a few miles above their home ground.

“. . . That sort of thing had a bad effect on morale,” Craig went on grimly. “Maybe our cold, unemotional friends on the other side could take that sort of thing, but we couldn’t. We had to think of some way of

changing the rules, and eventually we did. The R6 was the last of the old-style battle computers. There was no R7 or R8, but RK9—”

“R is for Robot, I know,” put in Henson. “But the K9 . . . ?”

“That will become self-evident in a moment,” said Craig. “The thing we were aiming for was for our computer to have personnel identification, to *feel* for the men it was using. We could not simply tell an ordinary computer to win a battle but to go easy on the men, a calculator can’t be programmed that way and remain efficient—in that case doubling the objective means halving the work done. The solution to the problem lay in neuro-surgery as well as in cybernetics. We decided to incorporate a living brain.”

“We had lots of volunteers, naturally,” the General continued quickly before Henson could say anything, “but we didn’t use them. We wanted a mind and a personality which would love humanity no matter what we did to it, and all too often, I’m sorry to say, man in the singular does not love mankind in the mass. So we used a dog—”

Craig broke off suddenly to stab a button on the panel before him, and a section of the battle flashed onto the main enlarger screen. The loops and arcs and cloudy patches of light told of a sizable Earth fleet cutting out and englobing a relatively minute force of the enemy. A few long, straight shafts of light told of vessels making for home and carrying their own destruction with them. But the main force of the Semrans being englobed would surrender. They would do it not because they lacked courage but simply because they were logical about such things and knew when a situation was hopeless. They would submit to having their hyperdrive generators wrecked by Earth technicians, and thus immobilised would wait until the battle was over for the Humans to make them prisoner and later make use of their ships.

“Nice,” said the General, and switched to another sector of the battle. He resumed, “The dog idea worked fine. It won battles for us in such sneaky, roundabout ways that the casualty figures dropped to practically nothing and morale soared. It was a perfect combination—a big, awkward, friendly mutt acting as thalamus to a super electronic brain. But in some ways she wasn’t a very bright dog . . .”

The General’s tone had become harsh and he was punching buttons furiously and not bothering to look at the pictures they produced. Hen-

son felt certain that he was doing it so that he would not have to meet his Aide's eyes.

"... For instance: The Semra resemble us so closely that it began to bother her apparently when we had to kill a lot of them, so she arranged her tactics so that more and more prisoners were taken. We didn't mind that because among other things we could use their ships. Then the P.O.W. problem arose and she told us how to solve that in a way easy for us and them as well. But now she has begun to do very stupid things.

"Things like collecting a fleet out by Sirius, stripping a whole sector of defences to do it, sending it tearing half across the Galaxy and then leaving it hanging there! There have been other things as well.

"Shawcross wants her destroyed."

Above them the battle was approaching its climax but neither officer looked at it. Henson thought that never had he seen such misery and desperate pleading in the eyes of any man as that being directed at him by General Craig. Instinctively he felt sympathy, an emotion he very rarely felt, but it was rapidly overwhelmed by sheer exultation as the General went on speaking. Now he *knew* . . . !

"It is eighty-odd years since they took her brain," he said thickly. "She was little more than a pup then, and all the resources of medical science have been used to maintain her brain at full efficiency. But that could not be expected to go on forever. Her mind is becoming rapidly more senile, she has started to chase imaginary rabbits, re-fighting the great battles of her youth against non-existent foes—that 'penetration in force' a while back was one instance. Shawcross says we cannot afford to maintain a battle computer which has begun to dote."

"You think she should be," said Henson in a carefully neutral voice, making it sound a statement rather than a question. His eyes slid away from the anguished face of the General to the little groups of high officers dotting the floor of the dome, to the men out on the surface watching the battle through spacesuit helmets, then up to the flaring, pulsating, wide-flung banner in the sky.

Many of them, the General included, had actually taken part in this battle they were watching. It had taken place over seventeen years ago and the fact that it was being watched here and now was because it had

occurred over seventeen light-years from Earth and the Light had only now arrived. It was the last attempt, the Earthmen thought, which the Semra could try at striking at the heart of the enemy culture.

Semra had been beaten to her knees, Henson knew, she was about ready to give in. But she must be capable of making one last, all-out effort, and given the information which he now had and full data on the dispositions of Earth forces while they were unknowingly involved in re-fighting past battles, that one effort might very well win them the war . . .

"I do!" said the General, the words bringing back to Henson the realisation that he was still in the middle of a conversation. "When you think of what we did to her—how we took her when she was only half grown, cut her off from all the sense perceptions, sound, sight, smell and all pleasure stimuli, normal in a dog. And the weeks of agony she must have gone through while we were doing all that.

"Yet she kept on loving us, the stupid pup!" Craig said half angrily. "What's more she learned to use and dominate the mechanical senses we had given her, and many times she saved the race with them. Not only that; this war, which could have been a savage, brutal, bloody conflict bringing total extinction to both sides, she has forced us to fight clean and . . . and humane.

"The Semrans owe her a lot, too," he went on, momentarily off on a tangent, "though they don't realise it. This whole idea is impossible to them, because they have long grown away from feeling friendship or love for lower life-forms and it is problematical whether they will ever grow back. Not that they are cruel, or even thoughtless, they're not. But they just have not got the emotional equipment . . ."

Above them the battle which was too vast and complex for mere human brains to follow was over. It was a great, tangled mass of glowing threads now, blazing with every colour in the spectrum because of their angular displacement, and already throwing out the great tentacles of light which indicated fleets going home, perhaps to die. It was a mark in the sky which would be seen all over the Galaxy—a stupid scribble made by two races who had not yet grown up but perhaps time would remedy that.

The General had accused the Semra of being without emotion, Henson

thought as he looked up with a mental struggle more violent than anything he had ever experienced before boiling within him. But Craig might be wrong. Maybe it had been the continued close contact with Humans which had done it, but this feeling in the throat, this tightness, this sense of something that was almost pain over an animal whose very existence he had been unaware of a few minutes previously . . . Yes, the General was definitely wrong, because when Henson looked upwards the lights of battle were overlaid by the picture of a dog.

It was an old dog. An old, blind dog whose hair was falling out and who didn't have sense enough to come in out of the rain. A dog that shivered and twitched and whined to itself while it dreamed of its past. A dog that had given love and long, faithful service despite the kicks and beatings. And a dog, Henson thought, who more than deserved to go on dreaming for a while.

But the General had been talking, though Henson did not know what he had been saying, and was waiting for some sort of reply.

"I . . . I think you're right, sir," he said, and wondered that the General failed to notice the strain in his voice. "And I don't think you have to worry about Shawcross—RK9 has the reputation of being unbeatable, and even if she does nothing else but chase her tail from now on it will look like some devious new tactic to the Semra. Besides, a mad dash half across the Galaxy now and then is good for discipline . . ."

It was no good, Henson told himself as he talked. Even if he sent this vital information home, and it was acted upon and Earth was overrun, it would still be no good. Semra could never win, never finally and unquestionably win, against a race that could spend countless millions on men and material movements out of kindness to a doting old dog. Nobody could win against a race which could be both so ruthless and so kind as that.

Deep within him there was a voice which cursed and reviled and called him traitor. It would continue, probably, for the rest of Henson's life, but it would never influence his actions.

He said, "Believe me, sir, I'm on your side . . ."

DEADLY BIRDCAGE

by PETER HAWKINS

Beneath a sky of midnight blue, flecked with the icy points of the distant stars half a dozen pressure-suited men straggled across sandy red hummocks and depressions, away from a small, isolated concrete building with its single significant chimney towards Nubis Lacus, a cluster of interlinked domes sparkling with artificial light.

The six men were waiting for one of their number to break the silence, hoping that whoever it was would avoid the pit of bathos but fearing he would not; the individual mental sweepstake each of them was conducting was as to what inanity would be uttered.

The silence continued. "Would it," thought Mike Henderson, be *"Mars-is-hell-why-didn't-we-choose-Venus?"* or *"Johnny-Daysh-is-dead-let's-remember-him-as-he-was"* or *"We're-all-intelligent-men-we-ought-to-get-stinking-drunk-tonight"* or . . ." It would be on those lines, unless something untoward happened. Give them another half a minute and then start to worry when the out-of-step comment hadn't been made.

Mike Henderson looked back over his shoulder, past the crematorium and over the monotonously undulating Martian landscape to the Birdcage. That's what the irreverent and cynical had christened it and Mars

could afford few of those. Hugo Deane was one; his deputy, Ross Wellack, was another. Earthmen couldn't afford to ignore or laugh at something which made mincemeat of their engineering and science especially when a Martian, a member of a race normally totally ignorant of and completely without the desire to know anything of engineering, created the damned thing in a night and was then obscurely disposed of by his fellow tribesmen for doing it as being contrary to their religious beliefs.

"Where are you off to, Mike?" bellowed Wellack's hail-fellow-well-met voice in the headset.

Mike started, relieved that whatever he'd done had broken the tension and prevented the anticipated stupid comment being made. He glanced about and saw that he had separated himself from the rest of the party by a hundred yards or so and was losing ground to the north-east, away from the Earth city at Nubis Lacus. He waved to show he had heard the message and walked towards the group, rejoining them.

"Nightmares about the Birdcage are bad enough without daydreams," stated Ross Wellack.

"You don't have to tell me that," said Mike, "but it's one of the things we've got to think about."

And, thought Mike, I've managed to make the idiotic, commonplace observation.

He blamed himself, in part, for Johnny Daysh's death. Johnny hadn't been quite like the majority of men on Mars; he had not their high stability rating but standards were having to be lowered as more and more personnel were required for both Mars and Venus. Since Venus offered the happier hunting ground for everybody from archaeologists to zoologists she tended to receive the best; also Venus had her youth while Mars was worn out and almost beyond the terraforming techniques available at the moment although there was a desperate hope, tantalising enough for men to try, that something might be done in the way of a facelift for the old, dying world.

Johnny Daysh had died the careless man's way. He'd forgotten about his air supply and about half-way home from seeing Siolem, the old Martian with whom he was working on the tribe's history and philosophy, he'd started to run, neglecting the fact that violent exercise would

use up oxygen faster. If he'd lain down and called for help he might have been reached in time; as it was aid came too late—just ten minutes after he died, according to Joey Wills.

For the last few hundred yards of the walk to the airlock Mike deliberately straightened his back and held his head high, looking at the cluster of lights behind the plastic dome. They shone like candle flames, each lamp surrounded by a rainbow-hued nimbus, giving the returning traveller a feeling of Christmas-like welcome. Inside the dome they were just fluorescents, like any other, doing their ordinary, day-to-day job of lighting a project, so that men might fulfill a dream. From outside they were a dream themselves.

As soon as he had straightened himself up Mike saw Siolem waiting by the airlock. The old Martian had not entered the dome, even to go to one of the low-pressure rooms probably because he had been told that Mike was away. Siolem stood motionless, looking less than his five feet in height because his feathers were puffed out as protection against the cold. Despite his smallness he looked very dignified and in his grey, unfeathered and otherwise humanoid face his eyes flickered with sparrow brightness behind lids which constantly moved up and down, lubricating the surface of the eyes against airborne dust. He pulled Mike aside and waited until the others had entered the airlock. Then he pressed an envelope into Mike's hand and walked off, without making any other attempt at communication, in the direction of the tribal burrow. Mike stared after him for a few seconds and then buzzed the airlock for admission.

Still clasping the envelope he made his way along to his solitary room. When he reached it he dropped the envelope on his bunk and stripped off his pressure suit. He took a shower and followed it with a tot of Nubis Lacus home-brewed whisky. Only then, time being relatively unimportant to Martians, and knowing that Siolem would neither expect nor want a reply for two or three days, he opened the envelope. There was no need for an answer; the proof of Siolem's written words would be found in Hugo Deane's workshop.

"I killed Johnny Daysh," stated the letter. *"I made a hole in the breathing tube on the fourth rib from the cylinder. Siolem."*

A bracket of thoughts flashed through Mike's mind. Why had Siolem

killed Johnny? Had Siolem killed Johnny or was this some hitherto unrevealed quirk of Martian psychology manifesting itself? Had Johnny transgressed some tribal taboo too strong for explanation? Might this be the start of a series of murders? If so, who would be next?

For a while there could be no answer. There had never been any trouble previously between Earthmen and Martians which was not straight-forward, honest and without malice. An Earthman had died because of a Martian's carelessness and vice-versa but there matters had ended, never with lasting bitterness. Never had there been any hint that any mishap had been other than an accident.

Mike locked the letter in a tin box in which he kept his few valuables and dialed a number on the phone. A cheerful voice the other end answered,

"Wills' pills."

"Mike's psychs," stated Mike.

"Pleased to hear from you. Everything—all right?"

"Yes, it went off without a hitch, thank goodness." Mike paused and then began afresh, "I'd like to chat a bit about Johnny . . ."

"We know each other's file on him pretty thoroughly, don't we?" asked Joey Wills.

"Yes. He'd no particular friends here; his boss is at Solis Lacus and we're waiting for someone to come out and pick up the threads he dropped." Again Mike hesitated. "I'm going to get permission to look through his effects and I'd like you to assist me."

Joey Wills hesitated in his turn. "It's funny, you know," he said, "I've no objection to performing a post-mortem but I hate like hell probing into what a fellow's left behind. I'll do it, though. Make it about seven, will you? I've got an appendix to hook out in half an hour. You were lucky to catch me."

They broke the connection and Mike called the Secretary's office to ask formal permission to go through Johnny's effects. Permission was granted and the key would be dropped on Mike sometime before six-thirty. Those arrangements made, Mike left his room and walked from the residential dome in which he lived, through a couple of connecting tunnels and another dome to the engineering shops where Hugo Deane

ran the pressure-suit maintenance group and store.

Deane was a big man physically, possibly the biggest Earthman on Mars. He had red hair and a nose to match from drinking far too much Martian distilled liquor, which made him morose and quarrelsome. Sober, which he was during working hours, he was an excellent mechanic, with a bloodhound capability for tracking down faults and an incredible ability for putting them right. He looked pleased at the interruption of his paper work and shoved a stack of files to one side.

"Hello, Mike. What is it? Business or pleasure?"

"Curiosity," replied Mike.

Hugo Deane selected a pin from a small box in front of him and started to pick his teeth.

"What would you like to know?"

"Have you re-issued Johnny Daysh's suit yet?"

Hugo Deane's mammoth figure seemed to shrink a little and he replaced his pin in the box.

"Not yet. We're modifying all that type of suit as and when. It's dismantled and in pieces in a box at the moment. Different sort of tube to be put in, gauge to be tinkered with, fabric tested, mark eight globe to be fitted. Practically a re-build."

Mike nodded. He remembered the paragraph ordering the job in one of the many reports and directives which came his way for information.

"Can I take a look at it, please?"

For a second or two Deane seemed as if he were going to speak. When eventually he did it was only after Mike's prompting.

"Well, can I?"

"Surely. Come this way." He lifted a flap to his counter and led Mike through his storehouse, past a couple of his men at work, past crates and piles of stores to a dimly lit alcove neatly stacked with boxes of uniform size on shelves.

"Fourth one along, fourth shelf up," informed Deane. "Can I leave you to it?"

That was precisely what Mike wanted. He inspected various pieces of the dismantled suit before picking up the tube and going slowly along it, pulling and twisting it, seeking the hole on the fourth rib.

He found it and continued his examination a little less methodically and finally packed all the parts of the suit back into the box. Then he returned to Deane and sat beside him at his counter. Once again Deane pushed aside his paperwork. He looked enquiringly at Mike.

"Well?" he asked.

Mike shrugged.

"It seemed more or less in order to me."

"It was in perfect order, Mike, apart from a hole on the fourth rib of the tube. You were looking for that and you found it. Now, how did you know it was there?"

"Let's ignore that for a moment," suggested Mike, "and ask why that news hasn't been made public."

Deane pawed through his papers with hairy, blunt-fingered hands and produced his log.

"Here's my side of it. Johnny died because there was a hole in his air tube. Cause unknown but very likely it was made with a small nail. Frost and Webb examined the suit and decided they wanted the whole affair kept quiet, at least for a few days. Satisfied?"

"Not altogether, Hugo. There's something a little peculiar going on and I don't quite know what it is, nor do people a lot higher in the scale than you and I. I've stumbled on it by sheer chance. Keep it under your hat and—please—don't tell anyone.

"I'm not likely to. Besides—I'm going back to Earth very shortly. I've done more than my time and I'm exercising my option to return, any ship any time. Admin are making sure I'm on the next ship." Deane's face widened into a smile. "I'm looking forward to it."

"Why are you going? You're doing well here. There's nothing quite like this back on Earth." Seeing Deane hesitate Mike added,

"Imagine you're on my couch . . ."

"You'll never have me there. I don't need head doctors." Mike had to admit he was a hundred percent accurate in his statement. "I did ten years on the ships before I started this job. This was perfect until the Birdcage. I decided that I'd had enough then, Mike. So I'm going back home. Do you blame me?"

"No." Remembering the tension the morning the Birdcage had been discovered Mike had to admit he could see Deane's point of view. Some of the Met section had gone to their lab on top of the highest

dome in Nubis Lacus and from there it was possible to see the rim of the highest grid of the Birdcage. Field glasses and telescopes can't overcome the curvature of any planet so the dull red framework on the horizon remained a mystery until three sandbirds packed with men armed to the teeth and carrying tv cameras beamed their astonishing pictures back to Nubis Lacus. Immediately a Marswide net was arranged to include all the other stations on the planet and the pictures broadcast live as the expedition approached the peculiar growth, some three hundred feet high, which had sprung overnight from a rocky outcrop often covered by red sand.

Birdcage was a misnomer; it was more like a coral yet something like an oaktree the way its branches grew, except that it was bushy and tight, roughly cubic and with roughly straight bars, which gave it its nickname enclosing the branches. It was red, like the Martian landscape, a dull monotonous red without variation throughout its great height and width. The engineers in the sandbirds declared it to be a structural miracle; the way the branches grew said they could survive only by perfect construction in even the lesser gravity of Mars unless there was some form of internal bracing, which there wasn't and anyway, engineering, physics and just plain supply problems, how could something as large as that, on a planet which supported nothing else larger than a two-storey hut, spring up overnight.

There were theories in plenty; all the specialists on Mars came to look at the Birdcage, to touch it, examine it and think about it. After a while, varying in time from a day to a month they relinquished the vastly overburdened hospitality of Nubis Lacus and returned to their own projects elsewhere on the planet. For a week or so there was speculation that it might vanish as mysteriously as it had appeared and a twenty-four hour watch was kept on it, to be superseded by an electronic hook-up that would warn of any change which took place.

The Earthmen began to sleep more easily after a week or ten days; after all Mars was an old world and several civilizations had probably lived and died on its red dust. There were still a considerable number of Martians, not difficult to get on with but neither seeking out nor rejecting the invaders. For lack of common meeting grounds the

two races tended to stay apart but generally the Martians seemed to favour the idea of rejuvenating their planet, although they expressed doubts as to its possibility. Theirs had been a slow adaption to a changing planet, as they had never seemed to have developed any kind of mechanical civilisation.

"You day-dreaming, too, Mike?"

"I'm afraid so," grinned Mike. "The Birdcage is a problem that's going to take a lot of solving. But thanks, Hugo. I'll let you know what transpires."

Mike walked more slowly back to his room, more preoccupied than on his outward journey. Without a doubt Siolem had murdered Johnny Daysh and only a specialist on Martian psychology could work out why. Johnny had come nearest to filling that position at Nubis Lacus with his anthropological studies; the work he was doing hadn't advanced far enough to have been divided into sub-sections. Could the matter wait until Johnny's successor came from Solis Lacus to carry on with his work and seek clues in it? Not really; it was too much like handing a bomb to someone and telling him it was likely to go off anytime. Mike intended to go through Johnny's notes with a fine comb, even if his successor objected violently later.

The phone was ringing as Mike entered his room. He flicked it on and said,

"Mike's psychs."

"Will's pills. Look Mike—some of the boys have just brought in Siolem. He's succeeded in committing suicide. He's not dead yet but he's past all we can do for him. He's asking for you to come very quickly. Will you? We're at airlock eight."

"I'll be there as soon as possible."

Mike trotted through a couple of domes, mind turning over reasons why Siolem should kill himself. He bundled himself into a pressure suit and stepped into airlock eight, watched by half a dozen men. Joey Wills was the only occupant, apart from Siolem, who lay on the floor, a rolled-up coverall supporting his head and a blanket enveloping his small feathered body. For a brief moment recognition showed in his eyes and faded away as Mike knelt beside him. Siolem was alive, but only just.

"No chance?" asked Mike.

"None." Joey Wills' voice, over the suit radio, was curious rather than sympathetic. "He's taken some of that moss-extract nerve-poison the early arrivals discovered. He's going fast. It's painless and if anything rather pleasant."

"I wonder why?" asked Mike reflectively.

"Something to do with Johnny, possibly?" suggested Joey Wills.

"Possibly," agreed Mike. "The sooner we get among Johnny's reports the better."

"Mike—I want you to stay with Siolem until he dies. That appendix appointment is overdue. There'll be no trouble and I think Siolem would rather have you than me around. He knows you better."

Mike agreed unhappily despite Joey's assurance and his own knowledge of the effects of the drug used that Siolem's final minutes would be peaceful. He had known Siolem over two years now and had introduced Johnny Daysh to him as a helpful and co-operative source of information. Johnny Daysh had worked up the introduction into a very fruitful partnership; the exchange of knowledge, all on a meta-physical plane rather than any other, had proved most useful, increased vocabulary and general knowledge rapidly and destroyed much of the distrust between the two races—until the Birdcage appeared overnight out of barren desert and no material. From then on Siolem had been elusive and even when cornered had proved very different from the willing and open person he had been previously.

Suddenly Mike knew Siolem was dead. There was no change in his facial expression, no indication that life had left the feathered body. Siolem was dead, and the airlock held the same emptiness as any other room when there have been two people in it and then, without warning, one has gone for good, leaving behind only the shell he inhabited while he lived.

Mike pressed the warning indicator to tell the watchers beyond the airlock he was raising pressure to normal and started unfastening his suit as the gauge registered twelve pounds. He asked two men to take Siolem's body to the mortuary and hurried back to his own room. Tomorrow he had the grim job of going to the Martian township and seeking out Balteoth who, as far as he knew, was Siolem's closest friend.

Possibly Balteoth could throw some light on Siolem's suicide—if tribal pressure would allow him.

Meanwhile there was a meal to have and Johnny's effects to be searched. Time passed slowly and when Mike went down to eat there was hardly a soul in the place and certainly not one in whom he felt he could confide the anxiety which was building up inside him. When he had eaten he wandered back to his room and found the key which one of the Admin staff had pushed through the letter box while he had been away.

Now Siolem was dead, and knowing Johnny Daysh and the dead Martian had been working together Hugo Deane would be keeping a close watch on all comings and goings, reporting them back to the inspectors, a check he was very well able to make from his position.

It was six-thirty when Joey Wills interrupted Mike's ruminations and Mike wasn't prepared either for him or for the news he brought.

"Are we ready for the job?" he asked as he opened the door and peered around the edge.

Mike blinked his eyes into focus and looked a trifle owlshly at Joey Wills.

"Forgive me," he said. "I wasn't expecting you yet."

"Yes, I know," agreed Joey Wills, "but I've got something which might have some significance in view of what we know already."

"Seeing ghosts, Joey?"

"No, not yet. Some of the boys took Siolem's body back . . ."

"But I was going to do that tomorrow . . ."

"I know, but somebody in Admin thought otherwise and detailed a squad to do the necessary. They handed over Siolem to Balteoth, who was in full ceremonial regalia and looked as if he was waiting for the event to happen. He said 'I'm happy it is so,' took the body and shooed the men away. What do you make of it?"

"I've not the slightest idea," replied Mike as he rose from his chair. "Balteoth's knowledge of our language isn't as good as Siolem's was but . . ."

"Precisely," interrupted Joey softly. "It's not what he said, it's the fact that he was in full ceremonial regalia, and therefore awaiting a certain anticipated event. What's important is that he was expecting it."

"It's an interesting point," conceded Mike. "Let's get along to Johnny's room, shall we?"

"Don't you think it might be important," persisted Joey.

"It might be," agreed Mike as they left his room, "if we knew what we were looking for. It's a pity Johnny is the one who died. He could have helped us a lot with this situation. As it is he probably hadn't got his notes right up to date . . ." He broke off, halted in mid-stride and grabbed Joey Wills' arm.

"How's this, Joey? Suppose Siolem killed Johnny because he was Johnny; for something he'd been told or had deduced, or could have deduced from information which had been given him . . ."

"Steady Mike, you're getting excited. It must be something on those lines and you've known it all along. What you're worrying about now is the magnitude of the discovery. Let Johnny's notes tell us, if he kept up to date with them. If not we'll have to do some work on them ourselves or persuade Solis Lacus to send Johnny's replacement quickly. In fact why not do that anyway? It would save a lot of sore toes all round."

"No," snapped Mike. "I blame myself to some degree for Johnny's death. He couldn't take life on Mars and I knew that; I should have sent him back to Earth at the earliest opportunity. If I'd done that he'd still be alive . . ."

"Cool down, Mike. I know I'd rather not do the job but I'm going to. Like one of my tranquilisers?"

"No thanks. Would you like a session on my couch?"

"Likewise, no thanks."

"Funny, you're the second person who has refused that honour today."

"Who was the other one?"

While they walked the rest of the way to Johnny Daysh's room Mike told Joey of his talk with Hugo Deane.

Johnny Daysh's room was as it had been left, bed unmade, papers here, there and everywhere, books open and closed over furniture and floor, a recorder with an unused tape fitted and the mike dangling halfway between table and floor. Jody Wills shook his head.

"Just where do we start?" he pleaded.

"I wish I knew. I hadn't realised Johnny was as untidy a person as this." He saw the sudden gleam of hope in Joey's eyes. "We're going to see what we can find, even so."

They placed all the books in piles, pinned sheets of paper together and Mike breathed a sigh of relief when he came across a series of tapes labelled consecutively from one to ten, and two fat pink files with eleven and twelve scrawled on their respective frontispieces. He felt less pleased when he saw that the last date in twelve was nearly two months ago. Then he started going through Johnny's personal effects; the regulation Martian clothing, the rather pitiful letters he wrote to lonely hearts clubs and the even more pitiful replies he received, some microfilms of technical abstracts but nowhere any personal letters. Johnny Daysh didn't seem to have any friends or relatives anywhere on Earth.

"Joey, do you know if Admin have a copy of Johnny's will?"

"Sorry, I don't know."

"That leaves us with two small, locked plastic boxes to open and then we can go and try to make series and sense out of his notes. Care to watch to make sure I don't palm anything?"

Joey came beside Mike as he produced a bunch of keys he had found in a drawer of miscellaneous junk. The first box yielded to the third key and inside it was half-a-dozen I.O.U's from different people on the staff.

"Hm," observed Joey, "that is interesting. I never heard it rumoured Johnny was a captain of finance."

"He kept that quiet from me, too," agreed Mike, "but lending is very much against regulations. It raises complications for Admin."

"Hard luck for them. Let's get the other box open and have it all finished with."

The second key opened the other box. As Mike threw back the lid a gasp of surprise issued from his lips and little tingles of terror skittered along his nerves.

"Oh, my god! A miniature Birdcage."

For nearly a minute neither of them spoke yet there was tension between them like static electricity before a storm. Mike broke the silence. He said,

"Until the Birdcage appeared there was no indigenous manufactured article on Mars other than utilitarian objects. Schiaparelli's canals were geological faults and the few cooking pots and water-carrying vessels were not decorated or made ornamental in any way. The only ornamentation the Martians use is on themselves, and then sparingly, at what we call their prayer meetings, but which are not prayer meetings as we mean the words. A few weeks ago the Birdcage appeared; now we have another one on our hands. What next?"

"Suppose Johnny made a model of the Birdcage?" suggested Joey.

"That small? This one's a pup by comparison and look at the convolutions. It would take a long time to model those correctly." Mike looked around for a ruler he remembered seeing, located it and measured the Birdcage along its length, breadth and height. "Near enough two and half by two and a half by three inches and therefore proportionally the same as the original out there. Weight," he hefted the miniature Birdcage in his hand ruminatively, "somewhat under half a pound. Material is the same, I should think, as the one outside, a sort of opened-out lattice of Martian rock. The configuration behind the bars of the cage may or may not be the same but we can soon find out that from photographs and studies of the original. Let's get back to my room, Joey, and start reading through these notes."

Mike left Joey at the hospital on the way back to his room and dropped an inventory on Admin of the things he had taken from Johnny's room, together with the key, before making finally for his own. Once inside he settled himself into his chair and started working through the file marked twelve. The going was heavy; Johnny's writing wasn't of the clearest, there were odd diagrams, sketches and doodles all over the pages with the writing itself in red, blue and even green ink, and there were paragraphs in pencil, cigarette burns where Johnny had presumably fallen asleep at his work and a sticky patch or two which looked like the remains of sweets.

After half an hour attempting to make sense and headway Mike gave up and satisfied himself by skimming through the folder with the intention of going through it again afterwards and making his own notes on the contents of the file. The work on tribal mores and customs, built up and modified over thousands of years had intrigued

Johnny greatly and from his voluminous side-notes and cross-references he was obviously well on top of his work. Despite the untidy appearance of his notes there was no doubt as to Johnny's capabilities in his chosen field; had he lived he might even have become a great man.

He recorded part of a conversation with Siolem.

Siolem: Our religion, way of life is growing, slowly, very slowly, towards its inevitable conclusion.

Myself: What's that?

Siolem: We don't know. We cannot tell whether a tree will grow straight and tall or become stunted, twisted and withered.

Myself: Are you sure your tree is growing straight and tall?

Siolem: I understand you mean no heresy by that question. All I can say is that the gap between our mental attitudes is such that we have not yet the means to bridge it. Remember, from as far back as the earliest misty legend we have been a race of philosophers which has studiously kept the approach of what you term the engineer away from our civilisation. Only Khalil, Lord of Darkness and Light, may create. At times he permits us to alter, as when we make pots from clay, or preserve our harvest for the winter. Khalil granted us those rights because he omitted to make provision for them in the first instance . . .

Here the extract of the conversation finished, with Johnny's comment:

"As you see, the tree has grown so crooked it's practically in the fourth dimension. I can only suggest that some tinkering with natural forces in the distant past has forced the Martians to take up this deadly ostrich attitude. We can only be certain that the forces weren't nuclear as there is no trace of artificial radioactivity on the planet except where our ships touch down."

Mike turned over the page.

"Siolem let a cat out of the bag today, which I'm sure he didn't mean to. He was talking about rights and wrongs and says that if any member of the tribe commits a crime for which death is the punishment the person who administers the punishment must die by his own hand for killing a fellow being. Normally, however, the criminal

is made to see the error of his ways and commits suicide of his own accord. This is most interesting as we all know the Birdcage was created (in defiance of Khalil) by Schoyarlee, the village potter, with whom I'd had several interesting discussions about which (I think) Siolem knew nothing, before he committed suicide. I suggest that Schoyarlee was made to see his error and put himself out of the way. Well why not? The philosophy and psychology of these damned Martians is so twisted I could cry."

A rap on the door interrupted Mike's study of Johnny's notes.

"Come in," he called, quite surprised when Hugo Deane's red-headed features appeared.

"Hello, Hugo. Sit down." He waved to the chair. "Care for a Nub-Lac special? Afraid it's all I have at the moment."

"Thanks, I will. It's practically all there is at the moment on Mars, anyway, according to my informants."

"And they know pretty well what's available, I suppose," grinned Mike as he handed the glass to Hugo.

"To Earth," toasted Hugo and after Mike's response said, "I'd like to have a little chat about one or two things with you—off the record."

"Looks as if I've got you on my couch after all," suggested Mike.

Hugo Deane shook his head, then stared at the floor. "Nothing like that. Johnny Daysh is dead and it's partly because of me he died."

You're not alone in your guilt, thought Mike.

"It's like this. As you know, I'm a heavy drinker and that costs money. I used to let Johnny have a suit to go outside unofficially now and again. He used to slip me a bribe," Hugo Deane gazed up defiantly from the floor, "because that's what it was and I'd let him have the suit. The way he reasoned it was that my hobby was a little drinking and his was more anthropology than he was allowed and we both would benefit by the arrangement. He went to see Schoyarlee by a fancy back way without Siolem knowing. Anyway all three of them are dead and they were all mixed up somehow with the Birdcage; thought you might like to have the information."

Johnny Daysh might have been a solitary person but he was certainly not unresourceful. Since his death several new facets of his character had come to light, most of them not as pleasant and innocent

as the face he presented to the world at large but all were part of a pattern to present himself as an accomplished dealer with his fellow humans. The loans, the bribery and the anthropological cloak-and-dagger work—perhaps more would come to light later on.

"Hugo," Mike went to a drawer and produced the miniature Birdcage he had found in Johnny's room, "did you or anybody you know try and make anything like that for Johnny?"

For a while Hugo turned over the Birdcage in his big blun-fingered hands. . .

"There have been plenty of models made and quite a lot of them have gone back to Earth but I think the majority were of plaster. This seems to be made of rock, just like the Birdcage out there." He gestured vaguely with his free hand, then looked up, startled, at Mike.

"Where did you get it?"

Mike told him. . .

"I don't like it, Mike," said Hugo. "I think Johnny Daysh grew that himself, the same way as that one out there, but how—that's not my division."

"Without anything to go on that was the impression I formed, too," said Mike. "Did Johnny ever talk to you after he'd been to see Schoy-arlee?"

"Yes—nineteen to the dozen. He seemed to think a lecture was part of the price of having out the suit illegally. But what he talked about half the time I couldn't tell you."

"Couldn't you recall . . .?"

"Mainly he was on about the Martian lack of engineering in any shape or form. Said their philosophers had sought ahead and saw nothing to be gained by physical and material exploitation and had concentrated on the spiritual approach and that having closed one avenue to themselves they hadn't travelled very far along the one they had decided was worthwhile." Hugo glanced at his watch. "Sorry, Mike, I've got a session lined up but don't you worry—I shan't tell anyone about this."

When he left, Mike lowered himself into his chair again. Hugo Deane had cleared up how Johnny had visited Schoyarlee. There the

matter rested; everything ended with Schoyarlee and the Birdcage, not physically but what it was to the Martian mind. First, of course, one had to understand the Martian mind. Something about it was certain; it didn't work as the human mind did and the Birdcage was a symbol, or a fact, which the Martian mind either chose to ignore or which its philosophy couldn't encompass. Suppose, according to Khalil that creation was his prerogative, and his alone; suppose that eventually, having come far along the road of non-physical and non-material things the Martians had eventually come up against a problem which could only be solved by creating, by engineering, what then?

The Birdcage?

But what did it mean, or represent?

Mike took a heavy sedative, and slept on his problems like a hibernating squirrel on his nuts until lunch next day.

After he had eaten his meal and passed the time of day over the phone with Joey Wills, Mike sought out Hugo Deane, whom he found sitting behind the counter in his store, bloodshot eyes brooding over the charts and life size pin-ups on the wall before him.

"Feeling a bit rough, Hugo?" greeted Mike.

"A little," Hugo admitted adding, "I've taken a hangover dose and it's beginning to work. I'll be as good as new in ten minutes."

"Fine. Would you do me a favour?"

"I'll try," Hugo seemed suspicious.

"Come over to the Martian settlement with me and have a talk with Balteoth?"

"Sorry, just had a weather check and there's the grandfather of all storms coming up. Everybody to come back in and no one to go out."

"That's a pity. Come when it's over?"

"Mike—sure you feel quite well?"

Come to think of it, Mike did feel tired. Lethargic rather than tired, at peace with the world, somewhat depressed yet very clear-headed, like the time he had wandered too deep into the Martian burrows . . .

"Mike! Mike!" He felt Hugo Deane haul him roughly upright and fling his limp body from side to side. He didn't remember falling to the ground but suddenly a heavy weight fell on to his chest. Then out of the noise and confusion Joey Wills' face swam into his field of vision

for a fraction of a second before everything faded away into absolute silence and blackness.

Mike recovered consciousness in the hospital, easily and without any ill-effects, as if he were awakening from a deep, satisfying sleep. He felt refreshed, relaxed and at ease; all he needed now was to find out why he had collapsed so ignominiously in Hugo's store. Admittedly, recalling that he had felt as he had when he had descended too deeply into the Martian caves and a sandstorm could be compared with caves in their effect, his symptoms on both occasions were not of claustrophobia but much more of the order of cave-sickness. He eased himself up in his bed and pressed the call button for attention.

Sister McQueen poked her head round the door in reply a couple of seconds later.

"How do you feel, Mike?" she asked. "Joey's on his way to you now. He won't be a minute."

Almost before she had gone Joey Wills entered the room, an anxious smile on his face.

"Feeling all right, Mike?" he asked as he sat on the chair beside the bed.

"Perfectly. Mind if I try standing?"

"You know most of the answers, Mike. If you think you can, try it."

Mike pushed back the covers of the bed and stepped out.

"A little funny round the ankles but otherwise excellent, I think. How long have I been out?"

"Two days—my orders," said Joey grimly. "Any questions?"

"Just one. Why?" demanded Mike.

"You've been worrying yourself about Johnny Daysh and the Birdcage. I gave you some time to recover, because you're in for a little shock."

"Tell me." . .

"I will. That storm which hit us as you collapsed was a most peculiar affair." Joey paused.

"I'm still waiting," prompted Mike.

"Well, I think you're fit enough. I'll drop some poison on you during the day which will tone up the system. Make you eat like a horse.

Now—the storm. The Met boys and communications have been working solid on it since it happened. That storm was a colossal electrical disturbance, shaped like the Birdcage. Now don't let it worry you. We're due to have half the specialists on Mars along within days for a fresh inspection of the Birdcage. I'll drop along to your room later. "Bye."

Mike was still standing by the bedside when Sister McQueen entered with his clothes. She put them on the bed.

"Are you quite sure you're fit, Mike?" she demanded, a little touch of anxiety in her voice.

"Yes, yes. Quite all right. I was just thinking of something Joey told me."

"In your pyjamas," she laughed. "Get your clothes on and away with you to your room."

Mike dressed slowly and walked, a little uncertainly, to his room his mind occupied with the one fact that the storm had been the same shape as the Birdcage. His thoughts progressed no further, although his mind accepted the statement. All his thoughts were of that one thing, he could neither think of anything else nor bring himself to build new theories around it or attempt to fit it into the theory which was slowly developing in his mind. It was a fact, something at which to marvel, something at which to wonder, like the Rosetta stone or the Krakatoa eruption.

In his room, still preoccupied with the fact rather than its meaning or interpretations Mike wandered aimlessly, sitting in his chair for a few moments and then walking restlessly, hands clasped behind his back, the few steps in either direction his cramped quarters permitted. After a few turns he took to looking over his few personal effects which like anybody's on Mars were limited to things of Mars; there was no room on ships for bringing surplus weight. There were specimens of sand and rock, a couple of the shallow cups which the Martians used for drinking and some pebbles from the bottom of one of the dead seas, together with a few fossils which occurred in their thousands and as such had no value except as souvenirs.

He picked up a piece of rock, hefted it in his hand and tossed it in the air. It hit the low ceiling and fell to the floor. Mike picked it

up, and looked closely at it. It felt warm to the touch and seemed to prickle slightly, as if weak electric currents were issuing from it. This could have been the piece of rock from which Schoyarlee had made the Birdcage, or Johnny Daysh had produced his miniature. The not unpleasant prickling increased, becoming more like pins and needles than a weak electric current and it seemed to be flowing to the piece of rock rather than from it.

Mike put the stone on his table, surprised and a little frightened when the sensation continued, as if something were being drawn from his body and into the rock. Just how long he stayed there, his hand hovering a couple of inches above the stone in what to an observer would have appeared to be a catatonic trance he didn't know, but the ring of the doorbell broke the spell and Joey Wills walked in, a bottle of pills in his hand. He spoke no word for a long time, staring in stupefaction at the miniature Birdcage which rested by Mike's hand.

Mike broke the silence.

"Joey, I just did that. If you hadn't come in I should have kept on, I think. I wonder how I did it." Mike dropped into his chair and stared at the Birdcage he had created. It was in no way different from Johnny Daysh's one, except that it was a little smaller, so presumably he had not been left as long undisturbed as Johnny.

Joey placed the bottle of pills beside the Birdcage Mike had just made and said,

"Both you and Johnny made one so between you there must be some common factors. Before Johnny came here you were doubling as anthropologist. Somehow, somewhere . . ."

"Where?" asked Mike hopelessly.

"Well, it's no wild talent, otherwise you wouldn't have had three of them popping up out of nowhere in a few weeks."

"Four, counting the storm," corrected Mike.

"Ah, yes. The storm."

Conversation lapsed, Mike fingering his Birdcage and Joey staring into the corner of the room. For perhaps ten minutes neither of them spoke, then Joey said,

"The experts will start rolling up tomorrow, Mike."

"They won't. There's only one expert on the Birdcage—me."

"You're right, there, I suppose," admitted Joey. "Wonder what they'll find out?"

"Like to hear a theory?" asked Mike.

"Of course. The wilder the better."

"It's not all that wild. As far as I know the only common factor between Johnny and myself is that we've both spent quite an amount of time in the Martian caves." Mike paused, a distant look coming into his eyes. "I had been down the caves, often, before Johnny came and what I saw, the directions I took, the movements I made are all registered somewhere in my head. I've been down, and along, North South, East and West carrying high pressure cylinders for staying away a long time. The locations are there, stored, locked in, just as they must have been with Johnny. Then, when the Birdcage storm passed over I felt the same as I did when I nearly passed out in the burrow. Cave-sickness, or so I thought. I suggest now that it was some adjustment brought about by sensing such a pattern, which gave me the power to reproduce it . . ."

"Mike," interrupted Joey, "you've got 'em bad. Just let me . . ."

"Oh, shut up!" Mike got to his feet and selected a piece of rock. He tossed it from hand to hand a few times, then placed it on the table, feeling little wriggles of sensation gather force throughout his body and direct themselves down his arm to the stone.

The phone rang, breaking through Mike's concentration. Joey Wills flicked it on while Mike looked closely at the piece of rock. It possessed lumps and projections which hadn't been there previously.

"Mike . . ." said the speaker.

"Joey Wills speaking but Mike's here."

"Good. This is airlock eight. Balteoth would like to see Mike here as soon as possible. 'Bye."

"Good-bye," said Joey Wills and flicked off the phone. "Any significance; do you reckon?" he asked.

"Schoyarlee, Johnny, Siolem, possibly the storm, this lot," Mike indicated the two pieces of rock on the table. "It can't be coincidence. Let's get down there."

Mike nodded and together they sped towards Hugo Deane's store. Hugo was in attendance, Ross Wellack looking over his shoulder at an airfeed diagram.

"Hugo," said Joey, "two suits, please, urgent." He pulled a pad towards him and started scribbling the requisition on it.

"Get 'em, Ross, will you?"

"Of course."

"How are you Mike?" asked Hugo.

"Quite fit, now, thanks," replied Mike. "Hugo, try a little experiment for me, would you?"

Hugo looked suspicious then agreed. Mike tipped the pins from Hugo's pinbowl and set it upside down on his desk. "Look at that and think of the configuration of the Birdcage. Put your hand over it, fingers pointing towards it."

Hugo obeyed and after a couple of seconds Ross Wellack appeared, a suit draped over each arm. Mike made elaborate gestures for silence and, happily, Ross obeyed. Hugo's eyes became a little glazed, as if he were thinking deeply about a problem and had lost contact with the immediate present. After ten minutes of frozen silence two little projections appeared on the pinbowl; after another ten the original two had grown considerably and three more had appeared.

"Hugo," said Mike.

He blinked and looked up from the inverted pinbowl with the little projections. Then he looked down at it again.

"Congratulations, Hugo. Now you have joined the select company of people who can create Birdcages. Also you're the first to do it out of a piece of genuine Terran polythene instead of Martian rock. Ross, would you get another suit—for Hugo please. Let's go and see Balteoth; I reckon we can meet him on equal terms, now we're not fumbling in the dark any longer.

"Whose not fumbling in the dark?" demanded Hugo.

"I'm not," stated Mike.

They suited up, walked rapidly to airlock eight and studied Balteoth on the screen. He wore no clothing or ornamentation and his feathers were close against his body, protecting it from what to him was an exceedingly high temperature.

"Looks safe enough," observed Joey Wills.

He told the airlock operator to warn Balteoth they were coming in

and clamped down his air supply.

By the time the three of them were in the middle chamber the temperature was comfortable for Balteoth and he had picked up a communicator. The four of them sat on the floor, Balteoth's grey, leathery legs folded up beneath his feathered body. Balteoth spoke first.

"Misfortune has once again made the Birdcage common knowledge," he stated, adding, "we are sensitive to their production."

"Not misfortune, Balteoth, chance," said Mike. "I think it most fortunate. I cannot say more than I think it will be of immense value to Terrans in all their workings wherever they are and it is something I don't think would have otherwise been discovered for several centuries, if ever.

"Martians are a race of philosophers; you discovered the Birdcage many hundreds of thousands of years ago and to you it seemed the ultimate truth, proving that the doctrine of Khalil—who created all things, but forgot to make cooking pots—was perfect. In the Birdcage you found all the great discoveries we have made without developing them—fire, the wheel, electricity, $e=mc^2$ and then the Birdcage, as a discovery in itself, the first step to understanding exactly what a creative mind is. There's a catch, though. To hold an image of the Birdcage in one's mind, as distinct from merely thinking about it, automatically produces a Birdcage from any inanimate object on which visual attention is focussed.

"So one automatically makes a Birdcage; the religion of Khalil, which says only he can create, does not permit the creation of Birdcages or anything else except cooking pots.

"So your race dwindled with your dying world, paralysed by a viewpoint which refused to permit its own work to proceed. The problem of the Birdcage is no problem to be solved; it is merely a tool to be used just the same as fire, or the wheel, or electricity or $e=mc^2$. It is the first step in understanding why a mind works at all."

There was silence for a while. Then Balteoth spoke, very quietly.

"In some things you are right. We have trained ourselves and are by inclination a race of philosophers whereas Earthmen as a breed are engineers. If the mind cannot accept something it rejects it, invents reasons for ignoring it and proceeds with another course of action."

The Ostrich approach, thought Mike.

"Why did Siolem kill Johnny?" he asked.

"Siolem was our leader and unfortunately told Johnny about our tribal custom of persuading the breaker of a major law to commit suicide. He worried a great deal as he was certain Johnny had deduced Schoyarlee died because of creating the Birdcage and decided to kill Johnny and himself to wipe out the knowledge. Unfortunately we were unable to prevent Johnny's death. Thereafter it was only a matter of time before Siolem took his own life as murder is punishable by death."

Balteoth paused, marshalling his thoughts. Apparently irrelevantly he re-commenced, "Schoyarlee was the nearest thing to an engineer in our village; now he is dead we shall have no one to make cooking pots. He is dead now, and we think for the best because although his tendencies could produce a Birdcage, once it was started he could not control it. So he had to die, not as you believed, for what he had done but for what might happen if he couldn't stop.

"I couldn't produce a Birdcage because my mind is not of the sort which will but perhaps many Earthmen will be able to do it, although I don't think they all will. Do remember, please, the storm which swept across here the other day and gave you Mike, and you Hugo, the final unconscious pattern to create a Birdcage is the residue of something that happened in the depths of antiquity I cannot tell you how long ago, when the first and until recently, the only Birdcage ever created was produced. It devastated and ruined our world. As you realise all you need is the unconsciously implanted pattern of the Birdcage to be able to create it for yourself. To us it brought destruction; I hope, to you, it will bring great things. Meanwhile we give it to you without prejudice as the mental tool you think it is. We will continue with our way, trying to solve a problem to which we cannot find the answer at present with the means and methods at our disposal. Goodbye."

None of the three Earthmen spoke for a long while after Balteoth had risen on his leathery legs and gone out into the biting cold of the Martian atmosphere. The inner doors of the airlock slid back and a puzzled technician who had been listening asked,

"What was all that about?"

"Full report and statement in the NubLac *Times* in a couple of days," said Mike, "meanwhile just think what's happened."

"Well, what?" demanded Joey Wills.

"Passed to humanity, which is basically a race of engineers, a philosophical tool which a race of natural philosophers couldn't use. It could be just like giving a lunatic child a machine gun."

RESEARCH PROBLEM

I was beginning to wonder if anything had gone wrong.

I was in the right city and in the right year and—or so I'd thought—on the right day. I'd set the controls myself for the specific day and hour in May of 1857 when, according to DeSандрас, Napoleon III had been attacked by an assassin while walking here in the garden. It'd suddenly become important to me that I see this man who'd come so close to killing the Emperor. I was doing my thesis on his early years, and on how the Carbonari had tried repeatedly to assassinate him. DeSандрас, the only one to mention the attack, had glossed over the man's identity, and I'd been seized by the irrational obsession of the true researcher that I *must* see and perhaps identify him. We were under strict instructions, of course, not to tamper with history in these Timelinear researches. Our job was to observe and to analyze facts brought out by personal observation. And *not* interfere!

It was getting dark, and still no Emperor. It was starting to drizzle, and I caught myself wondering if you could catch a cold in one century—suddenly there were footsteps on the graveled walk, nearer and nearer, and in front of me stood the familiar little bearded man, glittering eyes suspicious as he stared at my strange clothes and at the minitape at my feet. "Aha! What is this? A spy?!", he growled, and rushed forward. They'd all been right—he'd had courage.

I could feel him tug at my coat—and then, in the same moment, there was the familiar blackness—the blazing light—and then the blackness again—and then the worried voice of Davis, the lab assistant. He was wondering how I felt. Then I realized he'd stopped, eyes wide with interest. "What's this? What did you do with your coat button?"

ULTIMATE COMPLEX

by **DONALD MALCOLM**

The colourful magnificence of the sky of Marella, had a soothing effect on Gerdun Roos' tired eyes and work-weary brain. And the air would sharpen his wits; Elis A'Kren was due soon—he would need them. He was hard put to it to remember that, in his six months stay, he had turned up only one significant clue in his search for the answer to Earth's question. There were no famous people on Marella.

Marella lay a little way out from the centre of the globular cluster, Omega Centauri, an aggregation of 100,000 suns.

Roos was from Earth where one familiar star ruled the days and the nights were sable and velvet, speckled by many pin point suns. It was small wonder that he found the ever-changing kaleidoscope of lasting interest...

True nightfall was unknown on most of the planets in the Cluster. Marella was one of eighteen worlds in a five-star system. The nearest primary to the planet was 104 million miles distant while the farthest was only four light-hours away.

The view from the 200th level of the capital's plushiest tourist hotel was one of splendour. It was four in the arbitrary morning when the

sky was at its darkest. This happened, on the average, every five days. Even then, the heavens were half as bright again as the full moonlit skies of Earth.

The most distant body, a giant yellow star, had already set along with a smaller puce companion. From the 200th level, Roos was seeing apparent sunsets and sunrises, not actual ones. Several degrees above the eastern horizon was a largish dull blue star while the horizon itself was a blaze of ashen green and pale reddish pink, heralding the imminent rising of a close, slightly distorted double pair.

In the west, great flares of yellow gas flamed, scrabbling at the hills like the clutching fingers of a giant who had stumbled into a pit.

There were numerous stars, of all sizes and colours, dotted round the sky within a quarter of a light-year or less. Marella's 1000-mile satellite, 150,000 miles off, sailed in technicolour across the heavens.

Only directly overhead did the sky approach the blackness seen from Earth.

The double star seemed to pop above the horizon as if it had sprung from a closed box. The long axes of the slightly elliptical suns pointed towards each other.

The city below looked like a city that had sunk under the sea. With only the blue sun above the true horizon, it was drowned in a twilight-blue ocean with the reflected and diffused light of the other suns lending the merest touches of relief here and there.

Roos sighed. His stay in this colourful wonderland was almost over. His tourist visa was due to expire. He doubted if he could find the answer before then. And yet, something told him that what he sought was right under his nose . . .

When Earth had invented a faster-than-light drive, she had sent her star-ships, armed to the teeth, ranging far and wide into the Galaxy.

And everywhere, among the myriad races, they had found peace. It was a real peace, founded on respect for beings of all kinds among the stars.

The Earthmen had been accepted everywhere, if not always openly welcomed. Their weapons and ships, the pride of Earth's experts in mass murder and wholesale destruction, were looked upon as oddities. In

fact, some systems had politely requested examples of them to exhibit in their museums. The High Admiral had an apoplectic fit for a week when he heard that one.

When the all-over pattern of life and government in the Galaxy had been scientifically examined and analysed, socio-dynamicists on Earth could hardly credit what they saw. But facts were facts and, as scientists, they had to accept them.

Human beings, with the tradition of thousands of years of local, civil, national, racial and interplanetary war behind them, couldn't swallow the bitter pill of truth.

War and conflict, all that these terms implied, were virtually unknown in the Galaxy. At least one million Earth-years had passed since the void had flared silently with raw energy, since planets, even whole systems, had been reduced to dancing, purposeless motes of cosmic dust.

It gradually dawned on every member of the Solar Space Force, from the High Admiral to the lowest galley boy, that he was redundant. There was no one to fight. The psychiatric profession enjoyed its greatest boom for centuries. Eventually things settled down and the men found an amazing diversity of occupations once they discovered that there was nothing else for it but the bleak prospect of hard work. Some units spent their time giving military tattoos, unheard of in the Galaxy.

The Terrans thought that the Galactics, being totally unwarlike, would be easy meat in the harsh circles of trade and commerce. They learned many hard lessons and lost a lot of profit before they realised the calibre of their opponents. The Galactics had a respectful but very firm way with them, which, in turn, commanded respect and fair dealing. The petty criminals, parasites and sharks received short thrift.

Earth brooded. Not one teeny-weeny war in progress anywhere. Nobody wanted to stand up and indulge in a good-going fight. It was unnatural. It was only the thought of censure from the Galactics and the damage to trade connections that prevented a frustrated flare-up within the Solar System itself.

Earth continued to brood. The egg of suspicion was laid. Was it possible, they asked, that all those countless billions of beings out

in the starry wastes actually lived without the safety-valve of war?

Something stank. Inevitably, the alien way of life was construed as a threat to Earth. It mattered nothing that among all the stars was immense wealth, technological brilliance, labour-saving devices by the thousand, a high standard of living and no one wanting for anything.

The aliens must want Earth.

The egg hatched.

Earth decided to ferret out what the Galactics were up to. They planned to send out highly-trained psycho-socio dynamicists into the Galaxy to study social and cultural trends. General Haymire was co-ordinator.

Something just had to be cooking *somewhere*.

That was how Roos came to find himself on a planetary paradise. Marella was about the same size as Earth. The temperature, higher on the average, varied in a regular cycle superimposed on smaller fluctuations.

On the face of things, the Marellan social structure was normal by Earth standards. Planetary Government was in operation, holding sway over the twelve habitable worlds in the system. The remaining six were either too hot or too frigid to support life without artificial aids.

Each planet had its own Commission. Trade and commerce were in the hands of both State and private enterprise in a firmly-based balance. System ships ranged far and wide beyond the confines of the Cluster. They carried cargoes of heavy metals, precious stones, exquisite filigree jewelry, and a variety of succulent delicacies and rare wines.

When he had come to examine details of the Marellan culture more minutely, he discovered just how completely alien it was. The most curious point was simple, easily overlooked.

None of the twelve worlds had any personalities, no famous or eminent people. . .

The implications behind his discovery made Roos feel uneasy.

On Earth, every field of endeavour and achievement had its great names, the discoverers, the pioneers, the people with that extra *something* that set them above the mass of ordinary people. Art, music, literature, poetry, drama, science, technology, medicine, great names sprang to mind.

Every achievement in any field he cared to choose had, on the Marellan worlds, been conceived and carried to fruition as a group project. Elis A'Kren had tried to explain but Roos couldn't grasp the concept. To his way of thinking, there had to be someone with that touch of genius to spark the ideas off.

Here, apparently, everyone was a genius.

Soft footsteps sounded behind him.

He turned.

"How did—?"

Elis A'Kren smiled disarmingly. "Between friends, there are no doors," he answered the half-spoken question.

He was a magnificent specimen, as were all Marellans, male and female. Six feet six inches tall, he towered over Roos by at least five inches. His tanned, angular features were deeply etched with lines of determination and confidence. In fact, this latter trait oozed out of him as with all his race. His hair was short and silver-grey; his eyes were a kind but penetrative and shrewd blue. The nose and mouth were strong.

He was the complete antithesis of Roos who was sallow, black-haired, brown-eyed, and inclined to be lanky.

A'Kren was dressed in a one-piece bottle-green suit and a black, silver-lined cloak thrown over his left shoulder with carefully studied nonchalance.

His big white teeth flashed. "Come, Gerdun, let us take a walk. Your time here is drawing to a close. And you haven't yet solved your problem, have you?"

Roos stood stock still at the statement. "What problem?" he heard a strange voice ask. He realised it was his own.

"Why," Elis laughed innocently, taking his arm, "the problem of how we can always live at peace."

"How did you know my purpose here?" Roos' voice was very quiet, conceding the victory.

"I know many things," the Marellan evaded mysteriously, guiding him towards the door.

The anti-grav lift whisked them to ground level, they left the hotel

and walked along the slightly resilient pavement.

"Where are we going, Elis?"

"You'll see."

They passed through the magnificent City Square where the electronically controlled fountains played in a transient rainbow of shifting hues. That had been a group achievement like the awe-inspiring six-spired church on the west side of the Square and the delicate beauty and flowing architectural elegance of the Commission-building on the east side.

A'Kren watched him. At length, he commented, "You cannot understand why there are no great men or women on the Marellan worlds or in the Galaxy."

Roos sighed. So his companion knew that he had been in touch with other Terrans in other sectors to check if this phenomenon was isolated or Galaxy wide. He was beginning to feel quite small in A'Kren's eyes. How the tall Marellan must be laughing.

"You have discovered that curious—to you, that is—fact."

They left the Square and walked along the gloriously landscaped Avenue of the Five Suns which led to the spaceport.

"I have studied intensively the histories of most of your famous people of Earth. I saw the common factor that you, and all of your kind, have missed, probably because you were too close to take an objective view, and analyse what you saw without emotional colouring of some sort or another. What would you say—the doctor cannot cure himself or the writer cannot criticise his own work?"

Roos supplied broodingly. "We call it not being able to see the woods for the trees."

"Ah, yes! One cannot see the stars for the dust."

The Terran grunted. He found his mind was ticking over at a brisk, clear rate. The trees were beginning to thin out in this problem. The wood was coming into view.

Elis A'Kren went on. "Let us take one or two examples. Abraham Lincoln was a tall, extremely ugly man of scant education. But he taught himself by hard work and discipline, became a lawyer and eventually the President of the old United States of America."

"I'm with you," Roos nodded, thinking it over. What was the basic drive behind Lincoln's achievements?

"Then there was the Polish composer, Chopin, forced to leave his country at the age of twenty, never to return. He was too frail to fight the Russian invaders. He had to endure many snubs and painful experiences during his exile in Paris. The disdain of high-born women, the envy of fellow composers, the sacking of his beloved Warsaw by the enemy—yet something inspired him to write some of his greatest music at these soul-wracking times. He met George Sand and watched her flit from amour to amour. He gave recitals in Britain whose people received him coldly. Finally, only thirty-nine, he died of tuberculosis."

For a few minutes they walked in silence.

What was the common factor?

"I could give you many examples—"

"Wait a minute!" Roos halted. "I can see the common factor! Inferiority complex! Am I right?" He turned to face A'Kren, realisation lighting his eyes.

He smote his brow with the heel of a hand. "I'm a fool, we're *all* fools!"

They began to walk again.

A'Kren told him. "Inferiority inspires greatness, through deformity, ugliness, failure, lack of stature, a thousand causes!"

They approached the spaceport buildings which blended into the landscape with flowing lines and curves. All ships operated on anti-grav while in atmosphere, hence the proximity of the field to the city. A variety of alien craft were cradled on the vast launching apron. An ovoid ship rose noiselessly and accelerating smoothly, soon disappeared from sight. The hustle and bustle of people and the sounds of many tongues sussurated around them.

"Inferiority inspires greatness—but only when the people concerned have the strength, talent, determination and willpower to rise above their drawbacks, to fight and to conquer seemingly impossible odds." His angular face became hard and his eyes held a flinty glint as he continued grimly. . .

"Inferiority also *breeds* many things, fear, hate, resentment, avarice, suspicion, lust—" he broke off as he showed a disc at a small gate and they passed through and headed for a trim little gold and black

flitter. Roos sensed that A'Kren was really angry about this inferiority business.

"These emotions are the miserable lot of the mass of people who vent their frustrated spleen on each other. In turn these things cause war, death, destruction and famine. Witness the inferiority complexes of two men, both small, Napoleon and Adolf Hitler. Their complexes led to the deaths of millions. Such is the powerful energy of this complex for good, or, sad to say, more often for evil."

Roos put in comprehendingly, "That is why Marella and the rest of the known Galaxy boasts no famous people—or notorious people, for that matter. Galactics have no inferiority complexes, and therefore, no aspirations to greatness, wealth or power as we of Earth know these things.

Preceding him into the ship, the Marellan answered. "Precisely. Countless ages ago, our complexes were removed—over a period of time, of course—and our energies channelled into useful sources. The result was the banishment of many evils, like war, and a higher standard of living. No one had any *need* to fight."

They entered the neat, shining cabin and A'Kren checked with Control while Roos took the co-pilot's seat. Only the recession of the ground, as seen in the viewers told them that they were airborne.

Expertly, A'Kren computed the required orbit and put the ship on autonav.

The view was magnificent, with the double star, ashen green and pale reddish-pink, fully risen and the blue sun sinking in mournful hues towards the west.

"From what I can see," Roos resumed the conversation, "*we* on Earth are the menace, not the Galactics."

The Marellan nodded. "Earth has an inferiority complex a mile high and a mile wide. But don't worry. We have the situation under control."

The Earthman stared at him, noting the mischievous quirk of the other's mouth...

"I am taking you up to the Observatory to show you something, my friend," the big man remarked, changing the subject easily.

The little ship finally cleared Marellan's 1,000-mile deep atmosphere

and, minutes later, entered the 1,400-mile orbit of the slowly spinning Observatory. He checked with Dr. B'Aarl that no observations were at present in progress.

He eased the ship into a landing bay on the saucer-shaped apron and they suited up and went inside. Sensitive instruments had detected the extra mass and compensating gyros ensured that the Observatory's equilibrium was maintained. The ship, hovering on anti-grav, did not register.

Below them, the hemisphere of Marella was a glittering glory of intermingled blues, greens, pinks and chocolate browns under the silver tinged mantle of air.

A'Kren led him to the observational cage of a superbly engineered reflector. He estimated its aperture at something like 130-150 inches.

At the huge control console, A'Kren's hands moved over buttons and operated switches. The dome panel slid back, revealing the sky.

"Dr. B'Aarl will be along in a minute," he said, as he swung the dome a few degrees into position.

He came to Roos' side. "Astronomy here was a bit frustrating for a long time due to the amount of incidental light that upset observations. A scientific group invented an ingenious shutter arrangement now in general use."

He broke off as Dr. B'Aarl joined them, and made introductions.

"I was explaining to Gerdun about the shutter, Doctor," Elis said respectfully to the bent old man who, somehow, still managed to appear taller than the Terran.

"Ah, yes," the astronomer remarked, "before its invention, astronomy was rather limited, unless, of course, one travelled right outside the Cluster and who would want to go to all *that* bother? The shutter effectively enables an observer to isolate that part of the sky he wishes to study.

Roos commented. "Most of your work will be done by camera, I take it?"

"Yes, yes, that is true. After the programme is set up, we can see the transmitted observations on closed circuit television. Data fed to a selector allows us to change the plates automatically after the correct types have been chosen."

"Our friend, has a problem, Doctor. I was going to show him the Gar-

net Suns where the same problem exists."

Dr. B'Aarl fixed keen, clear eyes on Roos. "Ah, yes, Earth's problem." Elis invited Roos to look through the eyepiece.

Three sparkling garnet pin-point stars swam in the field of view like a formation of exquisite jewelled fish in an inky ebon ocean.

"They're thousands of light-years off," the astronomer informed him.

"And there," A'Kren went on, "on the one, so far, inhabited planet is a race which has the same problem as Terran races—inferiority. They are reaching out for the system planets now, fighting every step of the way, two forward, one back. It is only a short time since the whole globe was plunged in war. We keep a number of field teams there. Gradually, we will guide them onto the right path—the one of peace—without destroying the urge to invent and discover and pioneer."

They turned away and clasping hands with the astronomer entered their ship and took off for the planet.

Roos was sunk deep in thought as his companion slid the ship into the atmosphere like a needle into a vein. The Marellan broke in on his thoughts.

"We could do the same for Earth, if they would let us. You, for one, could be trained as a team member. You would be striving for a goal you will never see, but you would have the satisfaction of knowing that you were helping to cure a planet."

The Earthman glanced at him. "A wonderful offer, Elis, and I am grateful to you. But I still have to convince the authorities that inferiority is at the root of our troubles. No one cares to admit that *he* personally, has an inferiority complex. The man next door? Oh, yes; but not *him*. I leave shortly. I'll have to do some fast thinking."

Departure time arrived. The yellow giant, with its servile puce attendant, hung in lambent glory at the zenith while the eastern horizon was sprayed with streamers of blue and cobalt and ultramarine. The heavens between the two stars were subtly hued with greens. He and Elis cast two shadows, one long, the other short.

"You look happy, Gerdun. Have you solved your problem, then?"

Holding the Marellan's hand firmly, the Earthman nodded smiling. "I think I have. And, of course, I'm happy to be going

home." He paused, gazed around, then continued wistfully, "I'm going to miss this place."

"You will be back," Elis assured him confidently.

Roos boarded the ship, *Queen of the Cluster*, and, giving a farewell wave to the tiny figure of Elis, began his journey home.

At the edge of the Cluster, the passengers had a last look at the diamond that shone with a hundred thousand matchless stellar facets. The sight had a heady effect, like that induced by a good wine. Which was not surprising; the Cluster's bouquet had been blossoming for aeons.

Roos had work to do and he lost no time in making a start. Hyper-space radio messages came high but his Government position opened all doors—including the one to the communications room.

He made contact with his home office. Even with the new multiplier device, several minutes elapsed before he heard from Earth. He kept his request concise and brief.

When he had finished, the voice of his friend, Cranwell, eventually squawked, "You're crazy!"

"Do it; I'm carrying the can."

Silence, then: "They'll be able to boil you in oil in it."

Roos grinned wryly as he broke contact. That was very likely to happen.

A long, official black car—it resembled a coffin, he reflected morbidly—awaited him at London Space Terminus. He eased his lanky frame into it. The driver and the Security Officer weren't exactly talkative, as he was whisked away to HQ. That suited Roos admirably. He had much to think about. If Cranwell failed to obtain the information—

The car travelled swiftly along many streets through tunnels and over intersections until it drew up outside a carefully nondescript building, one that had fifteen floors underground.

Only when he excused himself to go to the bathroom did Cranwell slip him the information that he hoped would clinch his argument. Sweat popped out on his forehead and upper lip as he tucked it into his cigarette case ready for a casual inspection. He had heard some shady reports about the mines on Callisto . . .

General Haymire was a small, fiery man, very conscious of his small stature. He took the aggressive attitude to this unforgiveable blunder

on Nature's part.

His hair and moustache were as bristly as himself and his sharp, intelligent grey eyes, pug nose and determined chin underlined his aggressiveness.

"Welcome home, Roos," he greeted the arrival in a surprisingly quiet, cultured voice, shaking hands firmly.

"Thank you, General," Roos replied as they seated themselves comfortably.

Haymire fixed his penetrating eyes on Roos. "I trust you have brought news?"

The other barely hesitated. "I have."

His superior pushed a valuable, ornate, Capellan silver-and-platinum cigarette holder to him.

"May I smoke my own, sir?"

The officer affirmed, he took his case out, opened it and ran a swift, expert glance over Cranwell's cryptic data. They were better than he had expected! Lucky for him that the General was a small man or he might not have hit upon his clincher.

Two strong pulls helped to steady his nerves and he launched into his narrative. Haymire's expression altered but little as Roos talked.

When he had finished, the General contemplated him unwaveringly, much to his disconcertment. Such an examination usually preceded an explosion of nova proportions.

After five minutes of silence so taut it almost twanged, Haymire spoke softly. "Let me get this straight. The Galactics have no inferiority complexes, therefore they have no aspirations to greatness or fame—as individuals. For the same reason, they don't have war, famine, power-lust or any of the ills that terrestrial flesh is heir to. That's a fascinating theory."

Roos said, relief plain in his voice at Haymire's reaction, "It's not a theory, sir, it's a patent fact."

The General's eyebrows quirked. "I find it hard to believe. . . ."

"That inferiority can inspire people to great attainments you mean? I once heard a story about a boy who, when young, was frail and puny, never very well. The other kids, cruel as only children can be, laughed at him and wouldn't let him play at soldiers or any other game.

The General, who had been looking down at his virgin blotter, raised his head slowly, like a panther that had sensed his prey, and fastened a chipped flint gaze on Roos.

He went on, meeting the gaze. "One day, when things were hell with bells on, he resolved that he would become a great soldier and tell the rest of 'em what to do. I believe he achieved his ambition."

"A *very* interesting story, Roos . . . you clever devil!" An attractive boyish grin tugged at one corner of his mouth.

Then he barked abruptly. "I'm convinced." He slapped the desktop twice. "Now all we have to do is convince the Solar Council."

Five days later, flushed with triumph, for he had just been told that his information and the deductions drawn had been accepted, Roos presented a request to General Haymire.

For a small man, he owned a hearty laugh. Still chuckling, he called his secretary and had her type out a stencil and run off the official memos.

As he departed, Roos heard the General say between laughs, "The High Admiral will blow all jets when he sees that one."

Roos glanced at one of the memos.

Ref: As Appended List.

*Executive Office of
Solar Council.*

*To: Director,
Museum, Ancient Weapons Section
Kaplan,
Kaplan VIII,
Sector 9*

General H. A. L. Haymire

With reference to your request for a ship to display in your section of ancient weapons, I have pleasure in forwarding one "SOL" class heavy cruiser, fully armed, with the compliments of the Solar Council.

*For And On Behalf of,
Solar Council,
General H. A. L. Haymire.*

Roos grinned. The High Admiral would probably take off, complex and all.

PSEUDOPATH

by PHILIP E. HIGH



Welling paced restlessly up and down his office. He was not exactly frightened but he was near enough to it to be jumpy and over-tense. One expected casualties in a war, but this one—Soames was dead, losing Soames was like losing a brilliant tactical general, one couldn't afford to lose a man like that, particularly now.

Welling stopped pacing and stared out of the window at the city below. A beautiful city of delicate pastels and architectural perfection, humming with life. Yet, down there, beneath the untroubled surface of normal life was war. A war as brutal, as vicious as any in the world's history, a new kind of war.

Meeker came into the office silently and joined him at the window. "Deceptive, isn't it?" Meeker seemed to be reading his thoughts. "The enemy walks beside you in the street, he brushes against you in the park, speaks to you in a public conveyance and you do not know he is your enemy."

Welling nodded and made an angry gesture. "How did they miss this? Why didn't they see it coming? The trends were there, centuries ago, but never seen, never prepared for. Now that we're in it up to our

necks, all we get from H.Q. are reports on enemy weapons which they don't attempt to counter." He sighed abruptly and changed the subject. "You heard about Soames?"

Meeker nodded. His face in the sunlight had a waxy look which emphasised the lines about his mouth and the pouches of weariness beneath his eyes. "How did they get him?"

Welling shrugged. "Does it matter?"

"I suppose not." Meeker fumbled a cigarette from his pocket, sucked it alight, hungrily, and stared out over the city. "It just means that it's our turn next, yours or mine. One day we'll walk out of this building and—phut!"

'Fatalistic,' thought Welling, tiredly. An almost calm acceptance of a sudden and violent death. An acknowledgement that the enemy were lying in wait, biding their time for the moment you were off guard. The enemy could afford to wait, they could almost announce victory with a fanfare of trumpets. When the balance, in terms of numerical superiority was about two million to one, you could afford to dictate tactics. God! If only they could get Magnesta; if they could do that, they could split the enemy into warring factions and then . . .

Welling scowled at himself mentally. He was day-dreaming, wasn't he? They had about as much chance of getting Magnesta as they had of spitting at the moon and hitting it.

"Oh, I brought this." Meeker laid a folder on the desk. "You should read it, you really should. I think H.Q. or the psych labs are really scraping the bottom of the barrel, all we need after this is a man with two heads."

Welling sat down slowly at the desk and opened the folder. It contained a long and unnecessarily wordy report on a new officer. He turned the pages indifferently, reading only a few words here and there until a phrase at the foot of the third page brought him up short—to be regarded as a *telepath*.

"What the hell do they mean by that?" he said, aloud.

"Yes," said Meeker, "what?"

Welling ran a tired hand over his face. "What do they think we want—freaks? With only eighty-five trained men and nineteen women to hold down a city of twenty million, they send me *this*. God, they must

be mad. Listen to this: *'Although this officer's talents are strictly non-telepathic, on no account should enemy intelligence be allowed to discover this. On the contrary, enemy intelligence should be discreetly advised that a telepath is now operating against them.'* My God!" Welling's voice was almost an explosion. "Even if this man is a telepath which, according to the reports, he isn't, the enemy would blast this building wide open to get him if they thought it was true. Now they're asking us to stick our necks out and say we have."

"There are no telepaths," said Meeker mildly. "They've been trying for years and even neuro-surgery can't make one that works."

"They've got themselves a dummy one." Welling tossed the folder angrily to one side. "They're sending it to us to operate—and note this, Meeker—under the direct orders of H.Q. In short, although I out-rank him, he does as he likes. On the other hand, if he gets his fool head blown off, they'll ask me, as the superior officer, why I didn't take more care of him. Hell, haven't we enough on our hands?"

"Officer Lott, reporting for duty, sir."

Welling returned the smart salute casually. "We don't bother with stuff here, Lott. This is the front line, we try and save our energy for other matters."

"I'm sorry, sir, I—"

"Never mind, you'll know next time, won't you?" He smiled. He was too good an officer to let his irritation become personal. After all, it wasn't Lott's fault that Headquarters had singled him out to do a specific job in a particularly idiotic way, the fault lay, as usual, with those at the top.

"Sit down, Lott." He introduced Meeker casually and picked up the folder. "Your training reports seem particularly good, we can use a man with brains and ability but, candidly I can't see any use for your—ah—talents, as yet."

Lott smiled. He was a slight, pleasant-faced man of thirty with amused blue eyes which concealed considerable ability. Those eyes, Welling was to learn, missed nothing. Further, although the man's movements appeared slow, there was a suggestion of power and control which was unmistakable. Welling cursed again inwardly, this was first-class fighting material and H.Q. had thrown it away on some wild

scheme or other which would never work.

Lott said, quietly, "With due respect, sir, you can use those talents now."

Welling sighed, he supposed he'd have to explain it all. "We haven't the time to try, we're practically besieged in here. Every time we go out we take our lives in our hands, every flyer from the roof is tracked by enemy instruments—"

"I'm sorry, sir." Lott was interrupting, firmly but politely. "My instructions are to use my talents, they're there, they don't have to be tried, sir."

Welling opened his mouth but the caller at his elbow interrupted him. "Yes?"

Meeker watched, letting the smoke trickle from his nostrils, ready to act if action was called for, ready to relax again if the call was routine.

Welling looked up, he had forgotten Lott. "Mottram," he said softly. "Mottram got Soames and that's official."

Meeker ground out the spent cigarette. "Who does it?"

Welling shrugged. "Roberts or Judy, maybe both, it's their district."

"The enemy will expect it," said Meeker in a detached voice. "They'll be ready and waiting."

"It's still got to be tried, perhaps two of them may bring it off."

Meeker nodded. He didn't believe it and Welling didn't expect him to. In Welling's place, he would have to give exactly the same order which was virtually sending two agents to their deaths with no assurance of success to justify it, yet it had to be done, Meeker saw that. It was like the days of the old wars when retreating armies sent suicide detachments in the form of rearguards. There was little hope of the detachments returning alive but they had to be sent to give the army time to withdraw in order. It was even more important now, if they became wholly ineffectual they were lost. Nevertheless he was acutely conscious of the fact that Welling felt like a murderer every time he was forced to issue such an order. He realised suddenly that Lott and Welling were arguing bitterly.

"Don't be a damn fool." Welling banged his fist angrily on the desk. "At least Roberts knows some of the enemy, he has a chance of recognising some but you'd be completely in the dark."

"No." Lott's voice was stubborn. "I can detect the enemy."

"Heavens, man, listen to reason, we'd have won the war if we could do that, but we can't, we can't distinguish them from friend or neutral, no one can."

"I can," said Lott.

Welling paused, his clenched fist raised above the desk. "You mean you actually can read minds or something?"

Lott smiled gently. "Let's just say I have something—"

Roberts was a tall pale man with the bright, deeply sunken eyes of one who has lived on his nerves too long. He was breaking up fast and he knew it. He still walked with the springy step of a trained athlete but shoulders were inclined to slump and the strong hands were never still. Trigger-twitch they called it back at base and he knew it would not be long before he would be forever sliding his hand into his gun pocket to assure himself the weapon was still there.

He met Lott in a small downtown eating house and introduced himself with the correct gestures. "Welling says you can help us. We need help." He sat down at the table and glanced quickly over his shoulder. "I was tailed at first but I think I threw them. The real trouble is that there are so few of us, they know us by sight." He stirred his coffee absently, staring unseeingly at the dark liquid. "Mottram frequents the *Blue Grass Tavern*, usually gets there round about ten." He paused to sip his coffee.

"What's the set-up?" Lott toyed with a meal he didn't really want.

Roberts shrugged. "Purely tentative. Judy will be drinking by the bar, maybe she can create some kind of diversion and in the general excitement—" He shrugged again and said, bitterly, "Candidly it would be easier for us to cut our own throats here and now, save a lot of trouble. Mottram won't be alone, the place will be packed with neutrals and guards we can't identify." He pushed his cup away irritably. "Why did they have to drag Judy in? She's a nice kid, pretty, bags of courage but they'll kill her, too, with less compunction than a bed bug."

"I take it we don't stand much chance."

"If we get Mottram, which is unlikely, we'll come out feet first."

Lott said: "Thanks," drily. He leaned a little forward over his plate and began to cut at the cheap syntha-steak. "Welling tell you anything about me?"

"Oh, he said something about you being able to identify enemy personnel, but I'm afraid we won't have time to find out."

Lott was still cutting industriously and did not raise his eyes. "Two men just came in, they're standing by the autoserve, they're both enemy units."

Roberts lit a cigarette and looked without appearing to do so. "You're sure?"

"Dead sure."

"Looking for us?"

"You, anyway, they're not sure about me."

Roberts flicked ash at the table disposal slot. "Are they going to start something in here do you think?"

"Yes." Lott's voice was detached. "They're working up to a drunken fight, there'll be a struggle, shots, and somehow you'll get killed."

"Thank you," said Roberts, bitterly.

"Skip it." Lott pushed away his plate. "I can use another coffee." He rose before Roberts could stop him and crossed to the counter. "Excuse me," he said politely. Then there were two plopping explosions, so close they sounded like a single report.

Roberts turned just in time to see one of the men, face blank with surprise, clutch at his chest and fall slowly backwards. The other was already face down on the floor and very still.

"Let's get out of here." Lott's voice was quite calm and his hands were empty.

Roberts waited until they were a mile away and had changed air-taxis three times before he said anything. "My God, I thought you were green."

Lott shrugged. "Special training. The enemy concentrates on new weapons, we're concentrating on special type personnel to use the ones we have—reflex fighters."

"And I thought I was fast." Roberts stared unseeingly in front of him. "The first two enemy units in four months, knocked out by a recruit. If we're lucky enough to get Mottram too, they'll think we're getting reinforcements somewhere."

"Or perhaps," said Lott, "they'll start worrying how we managed to hit them so hard after all this time."

Roberts looked at him sharply. "Just what are your talents?"

"I can identify enemy units, even in a crowd of neutrals." He grinned faintly. "My file says I can read minds too."

"And can you?"

"No, but in due course, the enemy will probably think I can."

Roberts did not pursue the subject, he could see that Lott did not intend to commit himself and he probably had direct orders not to. Nevertheless something damn funny was going on. How had Lott *known* that the two men in the eating house were the enemy? There was no doubt that he was right, as they had left Roberts had noticed that one of the dead men had a Geeson pistol half drawn from his pocket. How had Lott known? The implications struck Roberts suddenly and he stiffened. With the ability to detect the enemy, they stood a chance. Not just a sea of faces in a night spot, any one of which might belong to the enemy but a few, identified, pin-pointed and allowed for by a man who had—what? If he didn't read minds, he got damn close to it. "What the hell do you call yourself?" he asked. "If you're not a telepath, what are you?"

Lott rubbed his chin and frowned. "I suppose," he said, after some thought, "you'd call me a pseudopath."

The *Blue Grass Tavern* was enemy controlled but designed to attract the neutrals. It was, therefore, outwardly respectable and prohibitively expensive. Real waiters, instead of table-dials, accepted orders and delivered meals, even the near-nude floor show was flesh and blood and not the usual solidex transmission. Between shows, tables were pleasantly intimate islands of shadows and artificial moonlight, made even more subtle and romantic by the new half-heard melody-projectors.

Roberts looked about him as they entered and said: "Damn!" under his breath. The lighting set-up was going to make shooting difficult, and, further, the place was packed with neutrals. Neutrals, the blind innocents of society who lived their comparatively normal lives unaware that around them was being fought one of the most savage wars in history. The ironic aspect of the war was that neither side told them it was going on. On the one side were the defenders, who for many reasons couldn't, they didn't control public news services any more and without those they were mute. Second, they had been manoeuvred into fighting a guerilla war and could not tell too much without betraying both

their strength and, possibly, their sources of supply and revenue.

The enemy, on the other hand, was striving for complete domination and you can't cook your goose until you've caught it. In point of fact, the enemy went to considerable lengths to convince the neutrals that all was well with the world while they skilfully undermined it from within.

Roberts looked round again, shrugged, and allowed a smooth waiter to guide them to a centre table. He studied the wine list and menu with some care, ordered the meal and waited until the man had gone before he spoke. "Judy's at the bar, blue dress, dark, shoulder-length hair—got her?"

"Got her," said Lott without appearing to look.

"Mottram is in the corner by the pillar, heavy, dark hair parted in the centre."

Lott saw a heavy-faced man with small but alert dark eyes. It had always troubled him that enemy units looked so normal, he felt that they should look tight-mouthed, expressionless and vaguely furtive but they never did. This man had a heavy, full-lipped mouth and, when he smiled, which was frequently, he displayed large but very white teeth. In the peculiar vernacular of the enemy he was a Top Torp and would be addressed as 'Gun' which was roughly equivalent to a specialist officer in a normal army.

"He hasn't seen us yet, I think," said Roberts softly. "Not that it matters, someone knows we're here. They never take chances and this place has talents of its own. There are little probes dotted around, so sensitive they can register a metal filling in an eye-tooth." He smiled without humour. "That means they know all they need to know, they know two men have come in with weapons, they know about the tiny spitrod between Judy's breasts, the only thing they don't know is when we're going to start. They could, of course, start the ball rolling themselves but they like to play it cat-and-mouse with the additional advantage of making it look like self-defence."

The waiter arrived with the order and Roberts discussed sport until he was out of hearing. He scowled briefly at his plate then drew it slightly towards him. "Damn it, I'm going to enjoy this, it's probably my last." He grinned twistedly at the other. "Don't imagine I'm joking heroically, will you? If it wasn't for the Andrabenze tablets they issue

I'd never have got in here."

Lott made no comment, outwardly he was calm but inside he was like a coiled spring. He could well imagine what one felt like after one mission too many, the inevitable day when one was compelled to fall back on the Andrabenze tablets in order to complete that mission without cracking.

He appeared to be eating quietly and steadily but he was watching, measuring distances, checking angles and noting exits. He pushed his plate a little to one side and toyed with his wine glass. "Four," he said casually. "The big man with bald head by the bar—he's there to cover Judy. Then there's the barman, watch him, he doesn't have to draw, his weapon is just below the level of the counter. Then on the opposite side of the room, two men in evening dress by the table near the wall."

After a few seconds Roberts said: "Got 'em." Then bitterly. "They're not taking any chances are they?" He sipped his wine, studying the situation. "Think you and Judy can keep those gentry occupied while I try and take Mottram?"

Lott was bending slightly over his plate and did not look up. When he spoke, his voice was almost inaudible. "You won't take Mottram, you'll never get the gun out of your pocket. There'll be a hole burned through to your spine before your fingers touch the butt."

"What are you trying to do—unnerve me?" Roberts sounded angry and bitter.

"No." Lott was still bent over his plate. "You see that fork he keeps playing with, sort of toys with and waves in tune to the music? Well, it's not a fork, it's a spit rod."

"My God!" For the first time Roberts paled slightly. "I could have walked right into it thinking I had a chance." He frowned and said: "Clever," bitterly. "All he has to do is aim." He looked at Lott with a new respect. "Perhaps it would be better if we thought out some other idea between us, any suggestions?"

Lott drained his wine glass. "If I can take those two characters in evening dress by the wall, I might have a chance of swinging round and knocking out our bald friend before he knows quite where it's coming from—"

Roberts nodded quickly. "Go on, I'm listening—" When Lott had finished, he considered carefully before answering. "Yes, yes, it might

work but you'll have to be devilish fast." He lit a cigar with some care and exhaled smoke.

Lott watched, the cigar was a signal. It was one thing which the enemy did not know and had probably never suspected. The enemy were probably waiting for him or Roberts to confer with Judy and then to act. A cigar might be a signal for that act but it never occurred to them that the conference was already in progress. Roberts made casual gestures, he toyed with a knife, he studied the contents of his wallet, he rubbed his chin. The gesture-code was vastly superior, at least for close work, than the enemy's micro-transmitters insofar that it could be neither jammed nor tapped and was almost unbreakable.

Judy raised her wine glass to the level of her eyes as if studying the wine and put it down again. The gesture meant: 'Message received and understood.'

Lott pushed his empty plate to one side. "Okay?"

Roberts nodded. "Good luck."

Lott rose. They were watching him, he could feel them. He sensed, rather than saw, the indicative sliding of hands, the sudden blanking of faces, the tensing of muscles. They expected him to approach the bar to contact Judy or, alternatively, to try and get behind Mottram. He did neither, he walked easily and steadily towards the door marked 'Wash-room.'

He felt the tension drain from the watchers, the spurious fork in Mottram's hand, which had steadied drooped slightly towards the table again.

Inside, Lott felt a knot of coldness which seemed to fill his stomach and invade his heart and lungs. This was his first real taste of action, the culmination of nearly seven years intensive training and, at the moment, the seven years didn't help. He was a soldier going into action for the first time and he was scared. Would the reflex action be automatic now? Would his body, his brain, his judgment react as they had reacted under laboratory test? 'If they don't,' he told himself, suddenly fatalistic, 'this is goodbye.'

Four more paces towards the door and action. Was everything clear in his mind? The two enemy units were in front, slightly to his right. Behind him, also to his right, was the bar, raised some two feet above

the floor. Judy was there, the big bald man just behind her. his hand casually, too casually, in his jacket pocket. Mottram of course would be invisible behind the decorative pillar. Pray to God some fool neutral doesn't decide to stand up in the line of fire just as you turn—*now!*

Roberts, watching, had never seen anything quite so fast in his life. One minute Lott was walking unhurriedly towards the washroom, and the next, the tiny electric machine-pistol was spluttering redly in his hand.

The two enemy units never stood a chance, a line of black spots cut across the immaculate shirt fronts before they knew what had hit them.

Lott spun round, and, at the same moment, Judy dropped flat. The second burst knocked the bald man off his stool and back against the bar.

Mottram half rose then fell forward across the table. Judy had shot him neatly between the eyes as she went flat.

Roberts fired once and the barman toppled from sight before his bewildered fingers could grasp the weapon concealed beneath the counter . . .

"They screamed the place down, milled around like sheep. We got out before anyone could figure quite what had happened." Roberts leaned back tiredly in his chair, he was shaking unashamedly from reaction and wanted nothing better than to sleep.

"So Lott did identify the enemy units, he actually does have some faculties for recognising them?" Welling was leaning tensely over his desk.

"If he hadn't we wouldn't be here now, they were all set to shoot us to pieces at the first move." He reached in his pocket and tossed something on the desk. "Judy scooped that up as we broke for the exits. Now how the hell did Lott know it was a spit-rod?"

Welling examined the 'fork' with interest. "Very neat." He frowned. "Yes, how did Lott know?"

Meeker, puffing the inevitable cigarette, said: "Hadn't we better concentrate on the immediate danger? They won't like this, seven of their units knocked out in a day is going to shake them and they'll react fast. They'll be drafting exterminator units for all their worth and in our honour. In four days this city will be hotter than a frying pan."

Roberts said, wearily: "Can I sleep until I feel the heat?"

"Sure, sure." Welling's voice was very understanding. "Room 229 is all ready for you." He smiled. "Hurry along, we brought your wife and kids in for safety."

"That's damn decent of you." Roberts eyes misted a little. "You don't often do that, do you?"

"It's not because we don't want to, it's because we haven't the room. In this case we daren't take chances. False names and spurious backgrounds may not be enough to protect them." He made an abrupt gesture as if to brush aside further thanks. "Tell Lott I want to see him as you go out, please."

Lott looked tired but still very alert. He looked enquiringly from one to the other but did not speak.

Welling waved him to a chair and poured out the customary after-mission drink. "You did damn well, exceptionally well. I've no word of criticism to make." He paused, looking unhappily at the younger man, not knowing quite how to put it. How could you tell a man that a soldier in this war who was too successful automatically signed his own death warrant. This war was a personal war. It was like the old stories of air warfare when an ace flyer was a natural target for every aspiring pilot in the opposing squadrons. Yes, it was like that only more so. In this case the whole potential of the enemy would be directed on getting that ace, only there would be no chivalry, no chance of survival and no warning.

"You've stirred up a hornets' nest," said Meeker, trying to help.

Lott nodded. "Thank you, I know what you're both trying to say but you see H.Q. wanted it this way. They *wanted* me to do rather well. You see, they want Magnesta rather badly."

"Would you mind," said Meeker, in a carefully controlled voice, "explaining that?"

Lott smiled. "I did put that rather badly, didn't I? What I mean is that we know nothing about Magnesta, he's a complete enigma. One day there is no Magnesta and the next he is in supreme command. Who is he? Where did he come from? All we know is that he exists, that somehow or other he unseated the previous commander and assumed absolute power. We have seen his picture and heard his voice but there has

never been any actual contact, nothing we can use to draw up a psych chart. We know he is vain, hypno-educated, and a natural leader and tactician but beyond that—" Lott spread his hands in an almost Latin gesture of helplessness.

Welling nodded then frowned suddenly. "You're trying to provoke him, the recent success, the whispers about a telepath—what do you hope to gain?"

Lott laughed softly. "We're hoping he'll be vain enough and, incidentally, stupid enough to come through on the solidex where I can work on him."

"You mean you can actually get something from a three-dimensional transmission?" said Meeker. "You see a moving picture and read its mind?"

Welling was rubbing his chin thoughtfully. "We could add to this," he said before Lott could answer the question.

"We still have one or two reliable contacts with courage enough to drop hints, we could start a crop, say that someone betrayed the enemy units, lots of things." He pressed a button. "Get me Hambling—"

Meeker stared unseeingly before him, thinking of Magnesta. The man who had welded the enemy into a complex but unified fighting machine which threatened to throw the race back to barbarism and had already brought it to the brink of economic and cultural collapse.

Magnesta who lived in a house which was half mansion, half fortress and cunningly erected in the heart of the city. It was mansion enough to deceive the neutrals, fortress enough to stop a restricted-fission grenade and yet too densely surrounded to try anything bigger without loss of life.

Magnesta, the most powerful dictator of all time who, but for a handful of devoted fighters, was complete master of the world. What could they use against him? The army? The army was rotten with enemy units and they could never bring it near enough to him without interiorly inspired mutiny.

What did Lott hope to gain? Certainly knowledge was power but you had to have a means of applying that power or it was useless. Probably H.Q. had something up their sleeve but, apart from Lott, they were keeping very quiet about it.

Meeker wonder if the provocation and bluff would work and, if so, how long it would take.

It took exactly seventeen hours.

"Mr. Magnesta calling on Solidex, sir." The operator's voice sounded almost awed.

Welling snapped his fingers and grinned savagely. "Hooked! Come on Lott."

In the reception room, light flickered mistily about a receptor chair, light which seemed to plane sideways into shadow and solidify . . .

"Good day, Mr. Welling," said the projected image, politely.

"You want something, Magnesta?" Welling's voice was cold.

"But of course, why else should I call?" The voice was smooth like the man, cultured, gentle almost, but not quite; oily. Brown bright eyes in a sallow face, dark hair, inclined to curl, small almost chubby hands but nothing to suggest the arrogance of power.

Welling said. "What makes you think you'll get what you want?"

Magnesta shrugged. "Deals and negotiations are not new."

"Between opposing armies?" enquired Welling, sharply.

Magnesta smiled, showing very white almost feminine teeth. "You asked before thinking, Welling. Are not the exchange of sick prisoners deals between opposing armies?"

"They might be if you took prisoners—what sort of deal had you in mind?"

Magnesta smiled again. "Let us try and understand each other first, then, perhaps, negotiations."

Welling laughed. "Really, Magnesta, I am not a fool." His voice was almost gentle. "You called because you heard whispers; you heard that, perhaps, someone betrayed your units, or, maybe that we had a telepath. You called yourself because, in your heart, you trust no one." He paused. "Would you like the answer?"

"If you give me the answer so easily then, obviously, it is not true. I, also, am not a fool."

Lott leaned slightly forward in his chair. "Suppose we can prove our answer?"

Magnesta only shifted his eyes slightly in the other's direction. "This is your new officer, Welling?"

"Yes, he is also our telepath, you may have heard about that."

A slight flush appeared in Magnesta's cheeks. "You think I am a damned idiot?"

"Lott reads minds well enough to identify your units." Welling's voice was even, almost detached. "You can dismiss it as fantasy or you can prove it. Call in some of your units, call in some neutrals, Lott can tell you which is which."

"Yes?" Obviously Magnesta was debating inwardly, then he frowned. "Very well."

The test was a pure triumph for Lott. Of the forty people, enemy and neutral, who entered the projection room, he identified them all.

"You are a clever man." Magnesta's expression was a controlled blank. "You can identify friend from enemy but this does not mean you can read minds."

Lott smiled. "Would I tell you if I could read yours? I would keep it to myself and use it later. Don't make too many plans here, Magnesta."

The other shrugged. "You are all fools. With a thousand such men you might have achieved victory. With one—pouf!" The image shimmered and began to fade.

"Any help?" said Welling later.

"Maybe," Lott was non-committal. "Excuse me, while I check World Army regulations." He was back ten minutes later, holding a slip of paper and grinning faintly. "*A deserter, or suspected deserter. Shall be taken into custody irrespective of civil law and, in the face of resistance, the officer-in-charge shall take such action as seems necessary insofar as he safeguards civilian life and property.*" He quoted from the paper.

Welling said: "So?" blankly.

Lott lit a cigarette. "Magnesta is a deserter from World Army, section seventy-four. As you know, all service personnel are marked with a red spot on the ball of the thumb on discharge. Short of removing the thumb altogether, this spot cannot be erased. Magnesta has no such spot, therefore he deserted."

"How did you know he was in the army in the first place—no don't answer that, you read his mind." Welling sighed. "I wish I knew just what your talents were." He stopped, frowning. "If you think the army

can arrest him, think again. The army does what Magnesta tells it."

Lott exhaled smoke. "If you lack power, use a lever." He rose. "What I want now is an officer of fairly high rank with a reputation for honesty and conscientious devotion to duty. No doubt a few such officers remain."

"Only neutrals."

"When I've finished with him, he fights for us. If he exists, records will find him with their classification computers."

"And then?"

"Then Judy and I will talk to him. I take it there's a way of getting out of here without being noticed."

"We can do that, but why take Judy?"

Lott grinned. "Why not, I need her for the psychological side, not that you'll believe me."

"I don't," said Welling flatly. He paused. "We can smuggle you out Lott, but you can't hide forever. Keep low and stay low, once they spot you you're a dead duck."

Colonel Wintering was a tall, greying man with tired faded blue eyes, slightly sagging cheeks but a firm chin. "Security? What the devil has World Security to do with the army?" He looked from one to the other in a puzzled way. "Why come to me?" He had checked their credentials carefully and there was no doubt who they were.

Lott said, directly, "We have access to army records, Colonel. We were seeking a particular type of officer and the classification computers selected you."

"You require some kind of assistance?"

"Perhaps a little more than assistance." Lott paused. "This may stagger you, Colonel, but the race is at war."

"I beg your pardon." Wintering stared at him blankly. "This is some joke perhaps?"

"No joke, Colonel, this is a war that has been going on a very long time and we're losing it."

"Really?" Wintering's voice was remote.

Lott sighed inwardly. He didn't want to be brutal but he saw he had no choice, the Colonel was disinterested and only half listening.

Fortunately Judy softened the blow. "You had a daughter, Colonel,

a girl about my age—she died in this war.”

Colonel Wintering stiffened and the faded blue eyes grew suddenly cold. “I consider that remark uncalled for and in extremely bad taste.” He rose from behind his desk. “Would you be good enough to leave now. Any assistance you may require should be forwarded through the proper channels.”

Judy didn’t move. “Your daughter was killed by a stray bullet in a street battle. An innocent bystander shot by an enemy unit trying to get one of us.”

“If you do not leave,” began the Colonel, stiffly—

Lott interrupted him, angrily. “Colonel Wintering, when the forces of organised crime become greater and more powerful than the forces of law and order then one is at war.”

Wintering slowly resumed his seat, his face was pale but there were twin spots of colour in the cheeks. “You are serious? You do not exaggerate?”

Lott shook his head. “World Security is all that is left. The last barrier against chaos.”

Wintering stared at him blankly. “I don’t understand. Why is it not known, why is not something done? If this is war, why is it not fought like one, by armies?”

“In the first place politicians control the army and crime controls the politicians. In the second, the army itself is lousy with enemy units.”

“It seems incredible, how did this start?”

“It dates as far back as the twentieth century when crime became organised by syndicates who conducted their affairs behind legitimate business fronts. A situation which slowly began to undermine society and force the cost of living to dangerous levels. In Paris, a determined Prefect of Police, succeeded in breaking up one of the syndicates but the resulting exposure resulted in a change of government. An unbelievable state of corruption existed, reaching almost to the heads of state themselves. Crime had almost succeeded in completely dictating city policy. High officials were found guilty of taking bribes or admitted that they had been intimidated by threats, either to themselves or those dearest to them, into acting for the syndicate.”

Lott paused to light a cigarette. "The result of course, was to cause similar crusading elsewhere with the same evidence of corruption in high places. The repercussions, however, were unfortunate. Some of the syndicates were nation-wide, some international, and the present purge threatened to break them up and seal off their immense illegal revenues from such undertakings as work unions, vice, protective associations and narcotics. For years, the syndicates had been at each others throats, now, in self-defence they combined. They were not fools, not stupid criminals, but astute tacticians skilled in administration. Their first move was to enrol an immense army of lawyers whose business it was to circumvent and corrupt the law. The corruption and intimidation of those in high places was resumed with skill and subtlety and very soon the law became a mockery. Corrupt judges, intimidated juries, bribed officials—"

Lott ground out the cigarette and laughed without humour. "Under criminal administration the situation seemed outwardly to improve. Crime had learned a great deal and there was a great show of purges, police action and so on for the benefit of the masses. All that stood between crime and complete domination of public administration was World Security. And World Security found itself deprived of its only weapon—law. It could arrest, only to have the criminal released by a corrupt court. Crime on the other hand had begun a private war of its own against Security, and Security in self-defence had to fight back and already they were at a disadvantage. If crime could corrupt the law, it could also intimidate or manipulate science to fight in its favour and the battle became not a clash of arms but a retreat—" Lott, leaned back tiredly in his chair. "Do I have to say more?"

Wintering drummed nervous fingers on the edge of his desk. "You have some proof of these assertions, I take it?"

Lott had. The Colonel studied the figures, the tapes, the view-shots and grew slowly paler. "It's unbelievable! Why couldn't I see it myself?"

"Neutrals seldom can, they are wrapped up in their work and, at a glance, all seems well with the world. Some, of course, suspect but have heard of enemy reprisals and deliberately bury their heads in the sand."

Wintering nodded, his mind evidently made up. "What do you want me to do?"

"Quite a lot. First, access to secret records, inductions, section seventy-four."

The Colonel lit a cigarette. "That can be arranged."

"I want to pick, unseen—incidentally, about forty men from your best combat troops. Lastly and most important, I want the troops under your command ready to march at a moment's notice. Now, before you say it, I know you can't move ten men and a sergeant from one place to another without authority from Army Council. Bluntly, they take their orders from the politicians who, in turn, receive them from Magnesta." Lott smiled, it was almost a feline grimace. "It has been proposed from H.Q. that coming from you, we might get sanction for moving a large body of troops and equipment. Now here's what they had in mind—"

Wintering nodded, almost boyishly, when he had finished. "Yes, yes, on the basis of recruiting figures alone, they would probably sanction it without a thought."

Lott stood up. "Thank you, Colonel." He paused. "You realise there is considerable personal risk, this is after all, war."

"No, Lott." Wintering shook his head. "I am not a religious man but I would call it something more than war. I would call it—Armageddon."

Welling stared moodily from the window at the streets below, for reasons he could only half explain, he felt strangely depressed. It was irritating to realise that this was H.Q.'s first major counter-attack and that they had left him in the dark. He liked Lott but he found it infuriating that the fellow could apparently read minds and promptly turn round and say he couldn't. H.Q. always fed you bits and pieces and left you to guess the grand strategy.

Judy standing beside him, turned. "Do you think it will work?"

"If we can get them there, yes."

"It could be the decisive battle couldn't it?"

"If we win this one, it is the decisive battle, it's the turn of the tide." He laughed briefly. "God, in ten years we might be able to arrest someone and make the charge stick."

"Instead of having to kill one of them when they kill one of us." She turned away from him. "Could you go for a girl you'd seen shoot a man between the eyes?"

He laid his hand gently on her shoulder. "We're soldiers, Judy, and this is war. Maybe he wonders if you could go for a man who can read minds."

Meeker came in. "How do I look?"

Welling studied him carefully. "Colonel Wintering will probably have apoplexy," he said, unkindly, "but I guess you'll pass in a crowd."

"The Advocats have started," said Judy tensely, "they're on their way."

Welling turned and gazed down into a street empty of traffic but lined with sightseers. Above their heads the advocats tossed their bright luminous words like bunting. THE ARMY IS COMING . . . THE ARMY IS A MAN'S LIFE . . . JOIN THE MODERN ARMY.

In the distance could be heard the faint strains of a military band and the rumble of armoured vehicles. DON'T JUST WATCH IT, said the advocats, JOIN IT—NOW.

"I must be going," said Meeker. He held out his hand. "Wish us luck."

Welling watched the parade pass, obsolete, he realised, but still stirring and impressive. the launchers, the armoured vehicles, the rumbling land monitors, the lines of marching men. JOIN THE ARMY NOW.

He watched it until it was out of sight, then picked it up again on the telecasts. He watched it march to the centre of the city, encircle the private Green Tree park and stop.

Welling grinned savagely. In the centre of Green Tree park was a white ornate building which was half fortress and half mansion.

"Blast!" He punched angrily at the switch. "What the hell's the matter with the damn thing?" The screen had gone black. He punched the switch again and slowly vision returned but it did not show the progress of the recruiting parade. In the screen was the face of a man Welling knew almost as well as his own.

"Attention, please, attention. This is Douglas Monkton, Director of World Security calling you from Command Headquarters . . ."

Welling sank a little shakily into the nearest chair. This was tanta-

mount to a mass assault and they must have been preparing it for years. Adding to it piece by piece and keeping those pieces in the dark until they found a weakness they could exploit. Now they'd found it, they were throwing everything they had at it. This broadcast, for example, they must have been holding that in readiness until they could really use it. He'd always considered it virtually impossible to jam the immensely powerful enemy-controlled newscasts but they'd not only succeeded in jamming them but had imposed their own transmission without a flicker of distortion.

"God," he said suddenly and aloud. "It look as if we might win."

Magnesta said, wearily: "Because I sanctioned this damn recruiting parade, it doesn't mean I have to look at it. If you've seen one soldier, you've seen them all. Turn it off, Morden."

His lawyer did so. "A lot of people seem to like it."

"Yeah, yeah, stops them worrying their M.P.'s, or senators or whoever they think represents them, about what they call gang war." He laughed abruptly. "Hell, this marching stuff may even hook a recruit or two."

A section of the wall, close to his chair, glowed briefly and he pressed his hand to the contact pad. "Yes? What is it?" He listened. "Are you insane, Condor?" He punched the vision switch angrily and found himself looking into the face of a uniformed man. "Yes?"

Wintering played it strictly according to the book. "Auguste Magnesta?"

"Yes."

"We have reasons for supposing that your real name is Otto Linz, and, as such, are a deserter from World Army. I am, therefore, instructed to place you under close arrest until said charges are proved or disproved."

Magnesta stared at him, blinking. "Are you out of your mind?" Aside, he said, "Call Morris, get this damn parade pulled out of town, fast."

"I can't, I've been trying." The lawyer's eyes were furtive and frightened. "We're surrounded, Magnesta and every damn truck must be full of jamming equipment. I can't call anyone."

Magnesta saw one of the uniformed figures behind the Colonel step

forward. "Are you coming out, Magnesta, or do we have to come in and get you?"

He stared, recognising both the face and the voice. "Meeker, you're a fool. If you take me, even you can't visualise the reprisals. You won't be tolerated, you won't be permitted slow liquidation because of neutral alarm, the whole lot of you will be hunted down and destroyed within a week and that goes for the toy soldiers with you."

"Magnesta, you're the fool. Linker and Moran will be close in line to take your place and they hate each others guts. Without you in the saddle to hold them apart, they'll be daggers drawn and we're still smart enough to set them at each others throats. Your pet boast is that you're a general, that you've studied history and this is a case of divide and destroy. I think your units will be too busy liquidating each other to bother about us." Meeker smiled, almost beatifically. "May I add, it gives me infinite satisfaction, Magnesta, that you unwittingly sanctioned the entry into this city of your own execution squad."

"You come in and get me, eh?" Magnesta showed his teeth.

"We don't have to." Meeker raised his arm in a signal and the firing ports of one of the land monitors clanged open. He didn't wait. "All right, let them have it."

The disrupter cannon was already obsolete and misleadingly named, its affect, however, was spectacular and wholly terrifying. It literally hosed its near-microscopic pellets down the projector beam. With each pellet containing the destructive power of the old-time six inch artillery shell, the weapon's misnomer was almost justified. Magnesta's mansion simply vomited skywards in a column of red flame and spinning black dust . . .

"The broadcast was the final blow, it really scared the neutrals and already they're clearing things up for themselves." Welling leaned back comfortably in his chair and puffed smoke. He had unearthed a box of enormous cigars from somewhere and a long hoarded bottle of brandy.

"I suppose," said Meeker, "H.Q. has been working on this for years while we held the fort." He looked at Lott. "And you, of course, were the prime weapon."

Lott shook his head. "To be perfectly honest, no. I was one of many experiments and only thrown in for a test. When it looked as if my

presence might produce some results, H.Q. hastily adapted one of many plans to exploit the enemy weakness."

Welling studied the tip of his cigar. "I suppose you couldn't tell us just what your talents are now?"

Lott grinned. "I'm afraid this is going to shake you, I haven't any. I don't read minds, I interpret gestures. My talents are nothing more than acute observation and the ability to interpret what I see."

"You wouldn't," said Meeker, carefully, "care to enlarge on that would you?"

Lott lit a cigar. "Remember the trend of employment psychology, when a man applying for an important post was interviewed by a psychiatrist. The psych could tell by the way the man sat, used his hands, position of his feet and voice inflection, whether or not, the applicant was suited to the position, without asking a single direct or personal question. We carried this technique a great deal further until we were able to interpret from a man's actions, if not his thoughts, at least his general way of life and, more important, his immediate intentions. This gave us the advantage of being able to distinguish enemy from neutral. Violence writes its intentions plainly in a man's actions and, in moments of tension—such as in the *Blue Grass Tavern*—to me the enemy might just as well have worn a uniform."

"We, too," Welling reminded him, "have also lived by violence for a very long time."

"With a different motivation," said Lott quickly. "That, also is detectable to a trained observer."

Welling sighed. "Without undue sarcasm, just what did you get from Magnesta? Are there certain gestures which say, 'Look, boy, I'm a deserter from World Army'?"

Lott laughed, good naturedly. "I wish it had been that easy. No, Magnesta had gone to considerable lengths to cover his past. He'd had his face re-moulded—detectable to a trained observer—had his finger prints, the shape of his ears and the colour of his eyes changed. In fact, he had even gone to the lengths of surgical operation to change his walk but there are certain things one cannot alter. Word pronunciation placed him as having lived most of his life in mid-Europe and there were certain vocal mannerisms which one only acquires in military training.

"In the first place, as I have mentioned, there was no red discharge spot on the ball of the thumb and in the second he was inordinately proud of his teeth, even a casual observer would have noticed that by the way he smiled. I noticed, however, that the eye-teeth were small and undeveloped which, of course, would be noted on an army dental chart. I figured that a man so vain about his teeth would probably leave them untouched. It was then only a question of getting the sorters to work on the charts and having them re-sorted in relation to height, shape of head, etc."

"Sherlock," said Meeker, but there was no malice in his voice. "And Mottram's spurious fork?"

Lott shrugged. "That was an easy one. Mottram was waving it around, toying with it, beating it on the table in time to the music but every time one of us made the slightest movement, his hand lifted and the end came up. The only possible weapon which could be adapted to look like a fork was a spit rod and, in any case, the man's every gesture was literally shouting: 'This is a weapon.'"

"Just one question more," said Meeker. "Just how did you know when you were in the eating house with Roberts, that those two were going to start a drunken fight?"

For the first time Lott looked slightly uncomfortable. "I lip-read too," he said, sheepishly.

NEXT MONTH—

ALIEN by FRANCIS G. RAYER

JOKER'S TRICK by LAN WRIGHT

SPRINKLER SYSTEM by E. R. JAMES

CONTINUITY MAN by GEORGE LONGDON

THE RAILWAYS ON CANNIS by COLIN KAPP

and

HIGH ROAD

A NEW NOVELET by James White

—in your NEW WORLDS

beyond surrealism

by E. R. JAMES

Gerard Avon, weekend case in one hand, interplanetary passport in the other, ran headlong for the helibus. There was a fifteen minute service so he had been told, but over three years had passed since he had seen his brother, Melvyn.

Dropping into a seat, he panted a moment with the case awkwardly across his knees. A small man, very spry in his movements, he was never still for long, neither physically nor mentally.

In three years the civilisation of Earth seemed to have changed but little, but there were differences. His quick brown eyes noted the fashions in clothes. Women seemed to be in a romantic vein, becomingly feminine; less repressed than he remembered.

Above a chic, flower-decked coiffure of a charming girl in front of him, there were strange posters, nothing intelligible at all, just lines and splashes of colour like something out of an impressionist nightmare.

He realised vaguely that his eyes were being turned without his willing them to move. He seemed to be slipping into a part of the poster which caught his eyes. The design seemed to open out around him, absorbing him . . .

The stars stood in silence around him as he spun in the eternal void. He felt he ought to be frightened, but somehow there were reassuring presences all around him. The view was awesome, magnificent, a riot of colour and pattern greater than he knew the reality to be . . .

His quick thoughts, racing ahead of his impressions, freed him from them. The interior of the helibus came around him again.

On the seat next to him, a sly-eyed business man nodded. "Fresh from space?"

"That's right." Gerard was too bewildered to think of hiding his ignorance of current trends. "That poster seemed to take my attention—is that how you knew?"

"Yes. It's one of Mel Avon's. Designed to soothe men returning from space, so that they will not be so terrified of going back."

"Mel doing poster work?"

"I don't think you've heard of the new art, have you?" The business man's bowler hat was straightened on his knees as though its owner were delighted with the opportunity to air his knowledge. "How exciting for you. It is the result of developments made by this Mel Avon. There are several variations but on the whole Avon's work is by far the most vivid. The psychologists call them Guided Auto Suggestion Pictures, but they're usually called Dreamies. Have fun with them, spaceman." He stood up. "But be warned not to get so you prefer their illusions to the challenges of real life. This is where I get off."

"Thanks . . ." Gerard scratched his small, turned-up nose. And cocked an eye from the grinning business man back at the posters. Deliberately passing over the one previously taking his attention, he frowned at a splurge of rich colour, all drifting wavy lines. He stared at it grimly. What was it supposed to mean? His eyes turned slowly towards the centre of the poster.

He was suddenly back sitting at a laden table and his mother was cutting the Christmas goose and his plate was getting heavy with the festive fare, and there were delectable odours of mince pies and rich puddings and rum sauce . . .

"Terminus," said a voice.

Gerard came back to his real surroundings with a start. Everyone was getting out. Following the others into the street, the unmistakable odours of Earth-cooking turned his head. Directly opposite to the helibus

terminus was an enormous glass and chrome restaurant with busy tables and flashing signs.

"Dreamie advertising, too?" Gerard shook his head. "Mel, you certainly have changed things."

Gerard lifted his hand to hail a taxi, but halted. The sign on a cinema flashed GUIDED AUTO SUGGESTION PICTURES. SEE ALL THE LATEST DREAMIES WHICH CAN BE CONJURED FROM YOUR OWN IMAGINATION.

He frowned. A glaring pattern above the sign seemed to draw his attention by its very familiarity. He felt his heart begin to pound. All around him people stood staring in admiration. He was about to show all this vast audience exactly what he could do—

He shook his head. The busy street hustled uncaring about him, a reality which somehow seemed less real—perhaps because less desirable?—than the fantasies which these Dreamies were able to conjure up in the beholders' minds.

"Cab, sir?" The driver's face strained with impatience.

"Yes." Inside the cab, directly in front of his eyes, a simple design of curves seemed to lift him so that the cab wafted along. It was an effort to give his brother's address, and to look away from the soothing lines and accept the hard old springing of the conveyance . . .

Mel Avon lived in a medium-sized detached house between towering blocks of concrete and glass. Gerard rang the front door bell, and, looking around, felt as much of an anachronism as this old house amongst its cubist neighbours.

Receiving no answer, he went around the back of the mellow building, up a half dozen worn stone steps to the back door. Twelve milk bottles stood on guard beside the rusted boot scraper. A morning paper stuck out of the letter box. Gerard pulled it out, poked open the flap and saw two other creased papers on the carpet half way down the hall.

He hung over the metal railing, glimpsed a box of groceries tucked up against the kitchen door in the basement. He glanced around, swung over the railing and caught the old casement windows, teetered a moment on the window sill and got his balance. The back sitting room was lined with pictures in the old art and the new, some covered up and

some unfinished and some savagely crossed with angry paint daubs.

One covered-up painting caught his eye, because its cover was marked with his name in heavy black, sprinkled with star dots.

He set one foot back on the railing, jumped down and went looking for a telephone kiosk. If Mel had moved out, Elaine would know—unless he had finally married her.

An unfamiliar voice answered.

"Is Elaine Appleby there, please?" he asked.

"No, I'm sorry. You didn't know she was dead?"

"Dead? Uh? Oh, please don't ring off. What happened?"

"She was knifed—murdered. Were you a friend of hers?"

"I'm Melvyn Avon's brother. Can you tell me what happened to him?"

"He's been arrested, Mr. Avon. This must be dreadful for you. I'm Janet—"

"Arrested. What for?"

"They think he murdered a man, I believe, although no charge has been made because of the outcry that would follow . . ."

The cramped interior of the kiosk seemed to revolve around Gerard's head. He found himself staring at a queer little pattern of lines at eye level above the telephone rest. His eyes moved along the lines and fastened on a point and the kiosk receded from his awareness. He glimpsed waving branches of a tree—

"Mr. Avon!"

"Yes!"

He shook his head. "These damn' hypnotic patterns everywhere I go . . ."

"You must find them strange. But they do have their uses. Try to accept them, Mr. Avon. Perhaps they will help you. I'd like to, if I can in any way . . ."

"No . . . Thanks all the same."

He caught another cab, refused to look at its eye drawing Dreamie and opened the paper instead. There were Dreamie advertisements and a whole page of Dreamie cartoons, and there was a leading article apparently written in answer to criticism by some leading personality. Dreamies, claimed the article, were the wonder of the age, replacing television, and the older pastimes of radio and the written word.

"Nearest police station," said Gerard.

He located his brother, who had apparently not yet been charged with any crime. After argument and proof of identity and finally a threat to bring in a lawyer, he was asked to wait and at length allowed into the cell in which his brother sat with head in hands as though he had been in that posture for days.

"What's all this, Mel?" Gerard asked without preamble.

Mel looked up. "Good God! Gerry! Thought you were safely in space."

"Home on vacation. What's all this about you being charged with murder?"

"I killed him all right," said Mel, and looked at the floor. "He had put a knife into Elaine, so I agreed to do him an individual Dreamie. Now the police and Home Office are trying to make up their mind whether I can be charged with murder."

Gerard frowned at Mel. Mel was quite unlike him. Mel was quite tall, rather slow moving, with prominent, almost protruding dark eyes, a dark complexion and a spade beard which in anyone else would have probably seemed affected, but seemed perfectly suited to the man. His wine coloured fustian jacket was splashed with paint of several colours if one looked closely. One of his socks had a hole in the toe seen through the openwork of sandals.

Gerard sat down and set his face in determination. "All right. Now tell me exactly what happened."

"If you want me to." Mel had always been indifferent to anyone's opinions. His sad eyes considered Gerard. "I wonder just how much you know of Dreamies? Have you got a pencil and piece of paper?"

Gerard felt through his pockets. "This ballpoint do? Here's a piece of paper."

"Thanks." Mel sat with eyes half closed for a minute or so, and then began to draw. "A crayon is better . . ." He added deft strokes. "But I think this will serve."

Gerard took the proffered paper and looked at the strange configurations upon it. His gaze drew to the centre of the paper and the drawing seemed to balloon out around him.

He stood in a garden and saw himself, as a boy, rushing with charac-

teristic vim towards him. "You stole it!" The furious image of himself lashed out with small clenched hand—

"Ouch!"

Gerard blinked. He was back in the cell. His head sang, and a dull pain ached and throbbed through his right eye.

"Do you remember hitting me like that when we were kids?"

"Yes . . . it was the only time we fell out," Gerard answered and lifted his hand to his swelling eye. "Why did you pay it back now?"

"I didn't hit you," said Mel. "You were induced by this Dreamie to experience my sensations during those moments in our mutual past."

"Uh? Gerard eyed Mel doubtfully, turned to look through the grille of the door at the back of the guard's head, and frowned. "I still don't understand."

"Mind over matter," said Mel. "The thing was so vivid to your brain that it reacted on your flesh and gave you a black eye. In some cases—unfortunately very few—Dreamies can cause people to heal themselves, by showing them how their illnesses began in their minds. I reversed the process, for you—and for Koap. Elaine had been stringing him along I think. In a blaze of jealousy, he stabbed her to death. I drew him a Dreamie and it killed him, opening his flesh just as surely as if he had had a knife used on him."

Gerard stared at the squiggles on the paper. "What are these?" he murmured as he fought the desire to let his eyes turn in to look at the inviting centre...

"Symbols . . . hieroglyphics . . . half formed drawings which are completed by your mind from memory or subconscious thoughts. If there had not been a link between us which I could bring into your mind to the exclusion of all else, I could not have given you a black eye. I would have had to be content with universal symbols—which are only vague, enough to give you a chilly spine or tired feet . . ." Mel shrugged. "Now go away, and let them make up their minds whether I'm a murderer or not. For it is quite true that I have killed a man." He sounded proud of that...

Gerard shivered involuntarily.

"Now," nodded Mel, "your mind is affecting your body without help from me."

Gerard swallowed hard and stood up. He could not just sit. He could not just accept what his brother said.

But Mel had a passion for telling the truth no matter what the cost. Mel had, after his own fashion, loved Elaine very much. Everything did fit together...

Gerard's fingertips moved over his hurt eye. As he turned, the guard's eyes widened...

"Didn't see that when you went in there, sir."

Gerard shook his head. "Never mind. Let me out, please."

He quit the depressing atmosphere of his brother's prison, and went hurrying off, driven by the demon of his own restlessness. From a video-kiosk, he phoned Elaine's old number.

The image of the girl he had spoken to before appeared on the little screen above the speaker so quickly that she must have been waiting to hear from him. As they eyed each other, he found his mind had been expecting another Elaine. But this girl's dark hair was soft and wavy, unsophisticated. Her brown eyes somehow gave the impression they had looked frightened ever since Elaine's murder. Her soft lips trembled. "Have you seen him?"

"You mean Mel? Yes . . . He says he did it."

"I know. With one of his pictures. Do you believe it is possible for any man, even a very clever man like your brother, to revenge himself for the murder of his girl, like that?"

"Quarter of an hour ago, I wouldn't have. But now I've had a demonstration," he touched his aching eye, "I'm not so sure."

"Oh." Tears glistened in her gentle eyes but, while biting her lip, she determinedly blinked them away. "How dreadful. I was hoping so much you'd prove it was all a mistake."

"Were you indeed?" Gerard moved restlessly, uneasily. "I'm afraid I'm no superman." He frowned at her anxious face. "Don't you believe Mel did kill this man?"

She shook her girlish head vehemently. "Oh no. He couldn't have—not really. He's intoxicated with his own genius, that's what. He's got so big-headed he thinks he can do anything with those pictures of his."

"You could be right," he said slowly. He wondered whether he believed she might be, or if he was only trying to reassure her. "How's a

nice girl like you come to be mixed up in this mess?"

"I'm Janet Appleby. Poor Elaine was my sister. She—"

"Good heavens! Oh, I am sorry, Miss Appleby. I—I wish there was something I could do . . ."

"Just letting me talk to you like this is a help, Mr. Avon," she said, eagerly. "I . . . sort of feel that Elaine was the reason for Mel wanting to commit a terrible crime. It made me feel very guilty, but there was no one I could turn to till now."

Unconsciously straightening to his full five feet six inches, he smiled. "I wish I could do more . . ."

"You . . ." She watched him earnestly. "You could go and see this dreadful picture for a start. I haven't had the nerve to."

"Where is it then?" He felt tense, like a wound up clockwork spring.

She swallowed. "Still in the place where Elaine was . . . stabbed to death, I suppose. Seeing that horrid Jack Koap was stabbed there too, it's hardly likely anything's been moved yet."

"The address?"

"Top flat—penthouse Elaine called it—in the new luxury block opposite Eros. I knew no good could come of Elaine meeting a man in a place like that—even though she said it was about a business deal for a Dreamie by Mel."

"I'll call you again later," said Gerard.

A mere few minutes after that, he stepped out of a silent, self-service lift, crossed a thickly carpeted corridor and touched the announcer button on a door.

A small acknowledging light flickered. A voice inquired from a small grille. "Who the hell are you?"

Gerard announced himself.

"Mel Avon's kid brother, eh?" A low whistle came from the grille. "And what are you after here?"

"I want to see this horrible picture my brother used . . ."

A sound of indrawn breath came from the grille. "The devil you do. That's police evidence."

"The police have Mel's confession. No evidence is required. Why don't you let me take the picture away?"

Several moments passed in absolute silence, and then the door swung

open. A flashily dressed man smoothed little dark pencil lines of moustache as he considered Gerard warily. "The damn' picture does give me the willies," he said slowly.

Gerard went in, looked around. Nothing but the best had been used in a place of this quiet magnificence. Dreamies with their ultra modern note seemed almost out of place upon the walls amongst so much luxury.

"Jackie Koap collected them," said the man. "We were partners in everything but that. I don't like Dreamies. Be glad to get rid of the last one Jackie got."

"Who are you anyway,?" asked Gerard.

The man fingered a diamond tiepin while his narrowed eyes continued to consider Gerard. "What's it to you?"

"Nothing, I guess," said Gerard. He was holding himself very still. "I just thought I'd like to thank you for doing me this favour."

"That sounds reasonable. I'm Des Barton, if that means anything. No? Never mind then."

Barton pointed with a beautifully manicured hand. "The painting's in Jackie's bedroom. Go and get it if you want. I'll be glad to have the thing out of here."

"Fine," said Gerard. As he moved with a deliberate step unusual to him, he noted Barton glance at the visiphone, and frowned without pausing. He pushed open the door. In the mirror of a dressing table immediately in front, he saw that Barton was looking sideways instead of into the room.

That was strange.

Gerard's gaze fell. Bloodstains all over the deep carpet around a chair set in the middle of the room. He moistened his lips and eased his collar.

Directly facing anyone sitting in that chair was the picture—it had to be the picture because it was the only one in the room. It did have a drawing effect, just like the others, but he found himself staring uncomprehendingly at the centre. Mel had said that with a special Dreamie like this, there had to be the bond between picture and viewer before it could have any effect.

"Hurry up, blast you!" swore Barton.

Gerard crossed the room, unhung the picture and came back to the connecting door, where he stopped. Barton was holding open the door

into the corridor. There was a gun in his hand.

"Get out, you young fool, before I change my mind!"

Gerard went with slow, even paces across the room but stopped, still several feet inside.

Barton's left cheek, which was all that Gerard could see of the man's face, had blanched to the colour of wax.

"Get out! You young fool. Get out, or I'll call the police."

"Call them then," said Gerard.

Barton shook. A rivulet of sweat coursed down from his forehead. He jerked the gun. "I'll shoot!"

"You don't dare."

Barton steadied. He whipped around.

Gerard held up the painting so that Barton must see it.

The gun went off with a deafening roar in the confined space, and something smashed, and bits fell to the carpet with little flashings of light on the edge of Gerard's vision as he watched Barton.

Barton's eyes stared at the picture. They widened in dreadful horror. The thin mouth below them dragged open. The whole face twisted in a torment of terror. Lips writhed in pleading. Agony jerked back the head, clenched the man's fists.

Blood rushed out from the chest in a red, pulsating fountain which diminished until it merely oozed as the body slumped down like a sack from which the contents are running out.

Voices and footfalls sounded in the corridor. Faces blurred to Gerard's horror filled gaze—appeared in the open door. A woman screamed.

He turned and picked up the telephone off the table. "Police," he said.

He was sitting in one of the deep, soft chairs when the police came. "I'm Inspector Dewart," said a tall man to Gerard while they both stared at the corpse. "This is the third killing in this room. What happened?"

Gerard told him.

"I see," nodded the Inspector. His sober face seemed to say that he listened to everything he was told but believed nothing until it was proved. "Why do you think he died like that?"

"Isn't it obvious," said Gerard. "I guessed what he had done from his bearing. Who killed Elaine Appleby I have no idea—either might have done it. Perhaps this man did it at the command of the other.

But I think that Barton certainly killed his partner. He must have understood what the picture was. Perhaps it almost got hold of him before. He used it to take the blame when he killed Koap. My brother was flattered to think that his picture had done what it seemed to have done."

"I see," nodded the Inspector. He made a non-committal gesture with his large hands. "At any rate from what the witnesses say, *you* could not have killed this one." He pursed his lips. "Not any more than you could have killed the others."

He jerked his head towards the door and two constables standing just inside the room took the hint and left, closing the door after them.

"Now, Mr. Avon, what do you propose doing about this—and about your brother?"

"There's one thing," said Gerard, "and that is he must never know that his Dreamie did actually kill a man as he expected it would. If he thought he held the power of life and death over criminals, he would soon be . . . quite mad."

"Quite. No man should be burdened with the knowledge he has such power. He might begin to see himself as a God."

The Inspector took the Dreamie from his hands and looked at it. "It means nothing to me."

"Nor to me. Only to the killer of Elaine Appleby according to . . . Mel . . . That shows Barton did it, doesn't it?"

"I've no doubt your suppositions are substantially true, but I think this picture ought really to be destroyed—"

"No!" Gerard caught hold of it again and met the Inspector's chilly grey eyes. "This dreadful picture has to seem to be of no value. The only person—perhaps two persons—who might say it was dangerous are beyond being harmed. Mel has to have it back to think of as being one of his failures."

Inspector Dewart let go. "I'll come and help you get your brother out of custody."

They walked around the body on the carpet.

Fifteen minutes later, Mel and Gerard walked side by side along the London streets. "Barton confessed to you that he killed Koap?" said Mel for perhaps the tenth time. "I still find it hard to believe." His shoulders sagged, the corners of his mouth were dragged down, and even his feet dragged—as though the artist in him would rather have

been left a murderer in the hands of the police.

Gerard nodded. "Did I tell you that this Inspector Dewart is anxious to keep the whole affair out of the papers. We don't want people to begin thinking that some Dreamie or other may kill them. It would disrupt the whole pattern of life—which you, perhaps more than anyone else, have helped to create."

"Huh-uh." Mel seemed to be brightening a little. He frowned. "Wonder where we can go to get a bit of decent company?"

"There's Janet Appleby. I promised to call her."

"Let's do that, then."

Mel headed for the nearest telephone. He turned from the receiver a few moments later. "She says she's expecting you. She's got your case, whatever that is. You seem to have left it by the milk bottles at my back door. You're to go and collect."

He shook his head at Gerard. "No, I'll just go on home." A slow smile lifted the corners of his mouth and brightened his eyes. "I've got my art—even if I haven't done my best work yet."

EXPLORING OUR SEAS

READERS of Arthur C. Clarke's prophetic *THE DEEP RANGE*, will not be surprised to learn that a recent report of a committee of the United States National Academy of Sciences, stated flatly that the study and exploration of the earth's oceans was "incomparably more urgent to the needs of national defense than space projects." The committee recommended a ten-year program of marine research, costing \$650,000,000 (almost three times what is spent now on oceanographic studies), to begin immediately. It was stressed that "action on any scale appreciably less can result in the accentuation of serious military and economic dangers."

The possibility, with current tests in mind, was raised that water welling up from even the deepest parts of the oceans could discharge contamination to life-bearing surface layers, and thus into man's food chain.

Considerable emphasis (paging Arthur C. Clarke!) was placed upon developing ocean resources. This included research in "stirring up" the sea to bring nutrients from the depths to fertilize surface waters; the artificial raising of larvae food; transplanting food species to where they are most needed, and estuarine and pond culture—with particular reference to the protein-starved neutral countries of South East Asia.

PROBLEM: SURVIVAL

by COLIN KAPP

Fort Athlan was seventeen square miles of scrubland and desert set in the midst of the thwarted, windswept wilderness. Its nucleus was a small, enclosed, temporary town of concrete huts and portable buildings straddled with random poles carrying power and telephone cables. Around the town was a double perimeter of barbed wire.

Mike Conyers regarded the fence with vague apprehension. He was no stranger to barbed-wire fences and all they symbolized in man's treatment of man. Despite the fact that his enclosure was entirely voluntary he could not help but recall other less happy confinements. Stuffing his hands deeply into his pockets and turning his back on the cold wind he ambled slowly over to the Director's office.

The Director greeted him with mixed feelings.

"Glad you could make it, Mike. It's almost like old times."

"Is it?" asked Conyers doubtfully. "I was afraid of that. I don't recall having much love for the old times."

Nye eyed him speculatively for a moment.

"Perhaps not, but this is different. We're on to something big, here, Mike, but we don't know how big. That's why the Controller figured

we could use a consultant philosopher on the team."

"One thing nobody ever wants advice on is their philosophy," said Conyers. "Why did you ask for me in particular?"

Nye shrugged.

"Sooner the devil we know than the one we don't. I'll admit we haven't always hit it off in the past, but there's always a first time. As a problem it's right in your line."

"Sounds interesting. Suppose you give me the facts, and don't make them too technical."

"Very well. Does the Housemann-Crane Discontinuity Theorem mean anything to you?"

"A little. It's a mathematical hole of some sort."

"Briefly, yes. The equations deal with a discontinuity in the law of probability when applied to a certain series of four-dimensional terms. It's a curious little hole in the structure of numbers—a basic flaw in the system we use for looking at things. But there's one snag about it."

"And that is?"

"We discovered the flaw is not in the system but in the nature of things themselves. Theoretically, given the right set of conditions, an area could be created in which the normal physics of three-dimensional space would cease to apply."

"Go on," said Conyers.

"The next part of the trick is how to translate the theory into practice. That's a tough job but we have it licked on paper at least. Using a system of stressed fields it should now be possible to reproduce physically the conditions of the mathematical discontinuity. It also leaves us with one hell of a problem."

"How so?"

"Consider the facts. We're certain we now have a method whereby we can stress a flaw in the fabric of the universe as we know it. This will give us a discontinuity, a hole if you like, which leads right out of our notions of time and space. But a hole to where? What lies on the other side?"

For several seconds the silence was broken only by the heavy ticking of the clock on the wall.

"Very neat!" said Conyers at last. "Very neat indeed!"

"I thought you'd appreciate it. We have reason to suspect that through the D-gate we shall come across a set of conditions roughly comparable to those existing somewhere in the known universe; but we have no right to believe that this will be so. If we should happen to hit something that is both abstract and impossible perhaps we also need a specialist in abstract impossibilities. Your department, I think."

"I thought there was a catch," said Conyers. "Every time I get a scientific liaison job I fall in the dirt. That's what comes of being a specialist, I suppose."

"It was your speciality that brought you here, Mike. As a philosopher you specialize in survival problems. Our little experiment may prove to be just that."

"As you said," remarked Conyers, "It's rather like old times. Is that why you chose Fort Athlan as a test site?"

"Yes, except for the team working on the apparatus the entire area will be cleared. That way any major disaster up to and including an atomic blow-up will only harm a limited number of people.

Conyers withdrew a crumpled sheet of paper from his shirt pocket and straightened it on the desk.

"You realise that in calling in a survival specialist you have declared this project potentially hazardous? Under our charter that gives me some pretty wide powers. Do you accept these conditions?"

"Under protest," said Nye. "It was the Controller's decision to call you in, not mine. You know how I feel on this subject."

"Aye!" said Conyers without malice. "I still have the scars from the last time."

Nearly five years had elapsed since the last guided missile had winged its deadly way from Fort Athlan. The site had later been prepared in readiness for the stock-piling of thermo-nuclear weapons, but the weapons never came to the dusty underground galleries. Instead Nye and his research team had filled the concrete caves with power cables and electronic gadgetry. In the old firing-control vault, the deepest part of the installation, they had established the enigmatic 'bomb,' the gateway to the universe beyond.

The bomb was a horizontal cylinder of chrome steel with a two-inch wall, being about a foot in diameter and the same in length.

Thick plates of ground- and polished-quartz were clamped across the ends of the cylinder, with a yoke forming an elaborate pressure seal. The sole support for the assembly was a heavy metal tube which passed up through the field coils to a supporting girder and then dipped down again to the vacuum apparatus.

"You really are expecting trouble," said Conyers with quick understanding. "I assume you intend to make the breakthrough within the confines of the bomb?"

Nye nodded. "It's extremely foolish to go poking holes into things unless you know roughly what's on the other side. We decided to use the bomb method so that if, on breakthrough, something decided to come our way we have a slight chance to contain it."

"Slight chance?"

"There is a limit to what even a chrome-steel bomb can contain. This merely represents a statistical compromise between what we are likely to need and what we have to observe. If you consider the extremes of temperature, pressure and density that exist even in the known universe you get some pretty staggering figures. Then imagine taking a blindfold sample on a complete random basis.

"You stand the most chance of finding yourself with a bit of first-grade vacuum, but you might be unlucky and grab a hunk from the centre of a sun or a neat slice off a dwarf star. The vacuum you could handle if you had it in a proper can. Catch one of the others and you're really in trouble."

Gottwald, the mathematician, was writing notes at the console of the computer. As they approached he looked up with just a faint hint of amusement in his dark germanic eyes.

"Don't let this optimist give you a false sense of security. Those are merely the least of our worries."

"You mean," asked Conyers, "that this gadget is capable of even more lethal tricks than filling the room with radio-active helium at a few hundred-million degrees Celsius?"

Gottwald nodded. "Just so! For myself I don't believe we shall get that far. Our bomb contains one of the best vacuums we are able to produce but, by the nature of things, it still contains a great many molecules of gas. On breakthrough we stand a very real chance of inserting at least a few of those molecules very neatly into the atomic

structure of whatever lies beyond."

"So what do we get, a new chemical compound?"

"More likely a new type of nuclear reaction, I think."

Gottwald laughed shortly, with his peculiar twisted grin. But Conyers sensed the fear beneath the calm.

"How does the computer fit into this," Conyers asked.

"Simply," said Nye, "because we have to locate the critical point in the equation and set up an analogous pattern of stressed fields. Since the fields modify each other by interaction and capacitance effects we cannot calculate exactly where the critical point will fall. To get around this we intend to couple the computer to the field tuning mechanisms and run through the entire series. With a twenty-three hour sweep on the computer we must pass through the critical point at least once in that period of time."

"Does the computer stop at criticality?"

"No. It merely records and passes on. If our estimation of gate width is correct we should make breakthrough and be past it in about ten to the minus-eleventh seconds."

"Surely you can't make any observations at such short duration?"

"No." Nye paused and lit a cigarette. "It depends on what there is to observe. If the other side of our window happens to be situated in the centre of a sun, for instance, observation is not over-wise. We have the bomb monitored for every known physical phenomena, potentially dangerous and otherwise. If we detect nothing we will repeatedly drop the sweep speed by a suitable factor until something does record."

"I see."

"When we read something positive we can stop and analyse our position before going further. Assuming nothing lethal we can continue with reduced sweep speeds until we can build up a picture of what things are like on the other side."

He stopped and glanced coyly at Conyers through the haze of cigarette smoke drifting toward the ventilators.

"I think," he added, "that you are going to be hard put to find exercise for your speciality."

But Conyers was lost in thought, staring at things unseen, a trace of bitterness on his face.

"Who's the new boy?" asked Baring.

Nye swore lightly. "A so-called survival specialist from the Philosophical Bureau, of all places."

"Jupiter! What's that?"

"It's a private organisation which does research work on semantics and parapsysics for the government. They have plenty of influence higher up so they do pretty much as they please."

"What's his interest here then?"

"Obvious, I think, Harry. Is there anyone in the world who wouldn't be interested if they knew what we were up to?"

"I suppose not. He looks a bit of a rum sort, though."

"Very and there's something queer about this whole set up. The Controller's signed a contract giving him emergency powers here. From what I know of the Old Man they'd have to squeeze mighty hard to make him sign a thing like that. The fact that Conyers has such powers on my project is galling enough, but what puzzles me is why he bothered to ask for them in the first place."

"Perhaps he just likes to throw his weight around."

"I'm not so sure. I've tangled with these philosophical chaps before and they usually have good reasons for everything."

"We could always chuck him out," supplied Baring.

Nye looked up sharply. "I don't advise you to try if you value your neck. Mike Conyers is a pretty tough nut."

"Even tough nuts crack with a little scientific leverage."

"Boy!" said Nye. "Never try to apply any sort of leverage to a survival specialist, because he won't be the one who cracks."

The hut assigned to Conyers was near the north perimeter at a point reasonably distant from those occupied by the bulk of the scientific and engineering staffs. This not entirely coincidental arrangement suited him well, for there were things to be done which were better done quietly and away from curious eyes. During the afternoon a military truck had delivered a load of his equipment, and the large grey instrument cases from the Philosophical Bureau Technological Division had already attracted too much attention.

He inspected the building and the immediate environment carefully.

and set up several mass-change proximity detectors to give advance warning of anyone approaching the hut. Then he sat by the window and read for the last time the letter which had brought him to Fort Athlan.

Office of the Director,
Philosophical Bureau.

Dear Mike,

I warned you that one day I would toss you a problem in which the chance of personal survival was a theoretical nil. This is it! I need hardly tell you that the idiot savants have over-reached themselves at last. Since you know of our work on the Housemann-Crane theorem you will appreciate the pure irony in their requesting a survival specialist. Indeed, the situation would be funny if it were not so heavily underscored with potential tragedy.

As a problem it is as subtle and deadly as anything you could wish. Since you have developed so consistent a knack of refusing to accept the inevitable I am, in a strictly academic sense, interested in seeing how the hell you manage to get out of this one. If it is of any consolation to you, remember that the devil looks after his own.

Seroia Passover.

The special paper left no ash. The destruction of the note was second-nature to a specialist like Conyers, but he smiled wryly in realising that one is seldom so scrupulous about the fate of one's own death warrant.

As a philosopher his department was the technique of human survival under all forms of stress and danger. This was a rugged and practical field involving not only actual and simulated contra-survival problems but also scientific liaison on projects where the hazards were yet unknown. His unparalleled knowledge of the strengths and weaknesses of man made him a handy person to have around when potential danger loomed ahead.

He spent the rest of the evening in an apparently aimless exploration of Fort Athlan, an activity which was by no means as casual as it appeared. He paid special attention to the layout of the tele-

phone lines and the communicator system, and established that there was only one radio-link with the base town of Sao Bernard, some hundred and twenty miles away. The telephone system boiled down to a single multiplexed line strung away across the desert on poles.

Soon after midnight he returned to his hut with the plan of Fort Athlan firmly in his mind together with the advisable routes to follow with the minimum risk of detection after dark. As yet he had little use for this information, but communication and movement are vital factors in the functioning of any organised group, and Conyers had a job to do.

He rose early the next morning and set about unpacking the instrument cases. Two of the cases contained specialized electronic equipment, transceiver, recorders and miscellaneous gear. The third and fourth cases held component parts of a large device the mere thought of which made the hair rise on the back of his neck. It was not so much that he was afraid of death—he was trained to be afraid and ply his trade in the face of that fear—no, it was the sheer inevitability which overwhelmed him. Death comes in many forms but few as surely as that which a survival specialist deals to himself with his own hands.

The scientific staff had a separate dining hall to the military and engineering teams. This was necessary inasmuch as a great deal of scientific shop was invariably exchanged across the dining tables. The peculiar sickness of the age which confused scientific endeavour with the Official Secrets Acts was rampant among the assembled company and he felt the hum of conversation die as he, an unknown quantity, entered the door. He flipped his pass to the receptionist and was escorted to a reserved table near the head of the room.

He sat for a few minutes unable to determine whether he was regarded as a pariah or a V.I.P. His doubts were resolved when he was joined by the Director himself.

"Brother!" said Nye. "Do you mind telling me what you've got holed-up in that hut of yours?"

Conyers' heart missed a beat. That was the last question he intended to answer.

"Specifically, why?" he asked guardedly.

"Because it's playing hell with our radiation monitors. The background count is completely shot to pieces. What are you doing up there, refining uranium?"

"Something like that," agreed Conyers. "There's a couple of radiation sources I use for checking some of my instruments. I expect you're reading them. They're a bit hot but well below tolerance."

"Not exactly a healthy thing to keep under your bed."

Conyers shrugged. "What else should I standardize on, faith, hope and charity?"

"Please yourself, but you'd better have the medics watch your blood-count. I don't want you growing another head while you're on my territory."

"What's eating you, anyway?"

Nye checked himself and smiled wearily. "The uncertainty, I guess. I've spent five years on this project and at a few days from zero hour I still haven't the faintest idea of what we're up against."

"What made you start all this anyway?"

"What ever motivates a man? Power, pride, position—you tell me. The whole world is grasping for advantage. Power and resources mean life and stability. Successful nations survive; the others go to the wall. It's the modern law of the jungle."

"And the D-gate promises such an advantage?"

"Don't you think so? Whatever lies beyond the D-gate must be of some use to us. Perhaps a new science or a new way to the stars. Perhaps a new material or a perfect vacuum or a limitless source of hydrogen for power or synthesis."

"Or a new way to die?"

Nye looked at him curiously.

"Or a new way to die," he said. He paused for a moment. "You know, sometimes I get the idea that you philosophers don't exactly approve of science."

Conyers shrugged. "Knowledge is power, and power is neutral in the affairs of men. It's like a bar of iron, you can use it as a tool or a weapon. Our concern is not with the knowledge but with the end to which the knowledge is applied. It's a question of responsibility."

"And you don't think that a scientist is sufficiently responsible to control the products of science?"

Conyers, who had walked in the shadows of atomic nightmare, bit his lip.

"Do you?"

"Surely the responsibility rests with society not with the scientist?"

"Does it? Think about it for a while. If a man gives a gun to a child does he bear no responsibility when the child turns the gun on his brother?"

"This is beyond me," said Nye stiffly. "I only work here. Since you're a philosopher I'll leave the ethics to you."

The bomb vault was well suited for its job. In its original conception, as a control room for guided atomic weapons, seals had been provided so that it could function for several days in spite of radioactive contamination of the desert above. These same seals would now perform the reverse role of preventing the spread of contamination in the unlikely event of the D-gate meeting with some peculiar and untimely end. An air plant could maintain a reasonable atmosphere for a week, independent of outside supply.

The lift went only as far as the lower galleries. From there to the vault one descended by stairs and corridors through a series of pressure doors. Most of the cable shafts ran parallel to the walkway and communicated at various levels with the galleries which held the modulators and gadgetry associated with the D-gate apparatus.

Conyers noted these details with a trained eye as he made frequent detours along galleries and passages carefully examining various aspects of the fantastic honeycomb structure of concrete and steel now snaked about with random cables and hot with the scent of transformer oil. He was especially interested in the routing of the control and the communicator wiring from the vault. In this he was aided by the logical coding of junction and relay boxes.

He found Gottwald still busy in the vault running computer checks.

"How goes it?"

Gottwald's skin showed yellow under the fluorescent lamps.

"How would you have it go? If you're intent on suicide a few decimal places more or less don't really count."

"You don't appear to have much faith in the bomb," said Conyers, selecting a chair.

"I have every faith in the bomb—as an instrument of destruction. The statistical odds of our breaking the threshold unharmed are so small I think they fall off the graph."

"Nye doesn't think so."

"Everyone is entitled to his own opinion."

"You think that breakthrough will result in an explosion?"

"I am almost certain of it. All my calculations point to that probability. A few molecules are all that would be required."

"Why are you telling me this?"

"Because you are the only one who has the sense to be truly afraid of what we are doing. Also you are not what you seem."

"How do you figure that?"

"You are a survival specialist, no? I understand that is your trade. You are here to ensure survival, yes—but not *our* survival."

"What makes you say that?"

Gottwald looked up, his dark eyes haunted with memories.

"Perhaps I have seen too many men whose eyes bear the knowledge of certain death."

Conyers searched the index of his mind. "You were in the concentration camp at Brilla, were you not?"

"Just so! For three years. That is where I learned to read the faces of men who have no future."

"You could be mistaken."

"So I could. I'm getting old and my health is not what it was—thanks to Brilla. I sense I am getting near the end of the line. I find in you a kindred spirit."

"Perhaps!" said Conyers. "Why don't you get out of this?"

"Why? Because there's another war coming and I've had enough of war. Truly I'm scared of death but even more am I sick of living. This is my epitaph. It runs: 'Your geiger-counter reads the remains of Wolfgang Gottwald, who died as he had never lived—in a blaze of magnificent glory.'"

Conyers got up and circled the bomb cautiously.

"You give up hope too easily."

Gottwald coughed a little. "I gave up such futilities a long while ago."

"Never mind," said Conyers, "where I come from they've hope enough for all of us."

As he traversed the higher levels he pondered on the significance of this conversation. Gottwald had guessed a good half-truth about his mission with an insight little short of miraculous. Either Gottwald was genuine or he had been trained in human-reactions by a master of the craft. If the second case was true there was more to the little German doctor than appeared at the surface. But how much more?

On a hunch he returned to his hut, coded a signal to the Philosophical Bureau and sent it out over the transceiver.

Throughout the rest of that day and all the next he continued to familiarize himself with details of the project. Having satisfied his curiosity on the main mechanisms he contacted Baring who was responsible for the instrumentation. With some pride Baring exhibited the detectors and safety monitors assembled round the bomb.

Conyers was not impressed, and said as much.

"You appear," said Baring with scarcely concealed anger, "to have a very poor opinion of our chances."

"Frankly, I don't give us better than one chance in a million give or take half a dozen. And that's a conservative estimate."

"So much for the philosophy of pessimism! Fortunately I don't have to agree. For myself I'd say about even chances. Remember we can detect trouble long before it reaches dangerous proportions."

"Famous last words," commented Conyers drily. "You are too easily blinded by science."

"Dazzled, perhaps, but not blinded. We planned our monitors in a very local way. In consultation with the Medical Council we tabulated all those factors known or considered likely to prove dangerous. We have provided sensitive instruments which can detect any of those factors for intensities and durations well below tolerance level. With the added protection of the bomb and the ultra-short exposure time provided by the computer sweep I really can't see anything to worry about."

"No," said Conyers, "I didn't think you would. You'd put your head in a lion's mouth trying to measure the carbon dioxide content of its breath. Look at this problem another way. Two hundred years ago ninety percent of your instruments didn't exist for the adequate reason that the phenomena they're designed to measure was either unknown

or imperfectly understood. Can you seriously maintain that in two hundred years hence the number of critical instruments wouldn't need to be increased by a similar percentage and for similar reasons?"

"No, but . . ."

"From which we can draw the point that we cannot yet define all the hazards which may exist in our own universe, let alone those present beyond it."

"True, but from the individual standpoint . . ."

"Individual nothings! You don't begin to grasp the magnitude or the subtlety of the task you have attempted. How do you recognise what constitutes a survival hazard anyway? Is it a physical factor or is it a set of circumstances?"

Baring thought about this for a moment, then smiled resignedly.

"I begin to see why they called you in."

"I'm sorry for riding you like that," said Conyers, "but survival is a problem which permits no errors to the individual. Even species must bow before it and adapt themselves or die. It is the business end of natural selection and the driving force behind evolution."

"I'm convinced," said Baring, suddenly without rancour. "But what can we do about it? We have taken all available steps to minimise the danger to others. Those of us who remain here do so with full knowledge of the possible consequences."

"I wonder," said Conyers quietly, "just how accurate your idea of the consequences will be." He walked thoughtfully around the bomb examining the complex field devices. "By the way, how do you limit the size of the D-gate field?"

"Edge cancellation. We neutralize the unwanted portion of the field flux with a secondary flux that's ninety degree out of phase. The small coils at the end of the reactors are there for that purpose."

"I see. And over what limiting dimensions could you control the D-field if you wished?"

"Down to about one micron, and up to about one metre in diameter I should think. The bottom limit is determined by Housemann's constant and the top limit by the instability of the D-field itself. Does that help?"

"A little. Have you any spare cable-pairs up to the second gallery?"

"I think so." He consulted the master wiring layout. "Yes, three spare pairs. Do you want them?"

"Please. There's some extra stuff I'd like to install up there, but I need a control this side of the vault seals."

"As you wish," said Baring. "Would it be too much to ask what you're up to?"

"Frankly," said Conyers, "you wouldn't believe me if I told you."

The latter phrase was nothing more than the truth. Even Conyers himself found difficulty in fully comprehending the device which he now prepared to place in the second-level gallery.

In its original conception the device had been sufficiently awe-inspiring, but the labours of the bureau technologists had further transformed it into eleven hundredweights of crated complexity without apparent function or beauty. It took the philosopher and three technicians two and a half sweating, straining hours to mount the two halves of the device one on the other in a vertical position. Even then Conyers was the only one who had any idea of what had been accomplished. A further seven hectic hours passed before the device stood gleaming and malignant in the depths of the gallery.

He dismissed the technicians and completed all the wiring with his own hands. Into the vault end of the circuits he put his own locked switches, and only the patterns of three small keys stood between an inquisitive tinkerer and an untimely end.

As he emerged from the main shaft the auto-caller wristlet on his arm began to tingle. He hurried to his hut and reached for the transceiver, but as he did so the telltale signals of the detectors caught his eye. The delicate mass-capitance balance of the area around the hut had been crudely upset since he had last reset his electronic watchdogs. The pens had straggled a ragged climbing trail across the graphs.

The wristlet vibrated insistently, reminding him that the transceiver call awaited urgently. He flipped the switch.

"Conyers in Athlan."

"Come in, Mike! Stand by for a tape from Philosophical H.Q., subject: Dr. Gottwald."

"Roll it, and then close out fast. I don't want this picked up elsewhere."

"Check! This is it. Coming to you on a tight beam."

Conyers listened to the tape with growing interest. It was a plain-language communication, which was unusual in Bureau transmissions and served to indicate the extreme pressure exerted in obtaining and collating the information it contained. The incoming carrier ceased abruptly as the last word died away. But sufficient had already been said.

The lock on the door had been opened—expertly. Inside the hut he detected traces of a careful and unhurried search of his belongings. Nothing, however, remained to give a clue as to the identity of the intruder. Cursing wildly for not having foreseen the need for a concealed trip-camera, he tried the only approach left to him.

He went outside and walked around in a wide circle, returning to examine the new graphs of his own movement and to compare them with those already traced. Then using the old graphs with his own trace to guide him he carefully calculated the path by which the intruder had left.

He made frequent trips outside to verify his triangulation, comparing traces, measuring and calculating until the pattern became clear. Then it was easier. The trail led circuitously away from his hut, crossed the main fairway at an angle and then disappeared between the sheltering bulks of the hut line opposite. Here the trace was almost obliterated by the static mass of the storehouses but faintly, in slight leaps of the pen, the progress of a man who had moved beyond the huts was deftly betrayed.

One . . . two . . . a careful count down the line to the point where the pen had no longer moved. He was using a magnifying glass now to examine the minute deviations on the graph. Did the man stop there or had the distance and complexity of the task gone beyond the sensitivity of his instrument? He took a stroll in the direction indicated and then checked the result. His heart jumped a beat. He could trace his own progress two huts further than the trail of the intruder. At last he knew his man!

In the back of his mind a faint idea crystallized into a plan of action. He checked his stock of instruments and puzzled out a few details. Experimentally he set up a few circuits, tested them, then rewired with growing enthusiasm.

Working without schematics he marshalled the circuitry in his brain and translated it straight into an improvised haywire gadget of trailing wires and interconnected parts. He tested as thoroughly as time permitted and was gratified to find that, with a few minor adjustments, all was functioning as he had hoped.

The guard changed at midnight. Conyers waited patiently until the old guard had returned and dismissed, then stole like a shadow across the fairway and into the shelter of the huts beyond. Counting off from memory he moved down the lines taking great care to attract no attention from the watchmen.

The door offered no resistance to the picklock and he was inside the hut before Gottwald woke.

"Who is it? What do you want?"

"Conyers. I want to talk to you."

Gottwald moved up in the bed and fumbled for the beside switch. Conyers, with eyes accustomed to the dark, knocked up his arm.

"No lights. I want this conversation private."

Gottwald pulled a cover round his shoulders. "What do you want?" he repeated.

"I want to know by what unholy pact they let you out of Brilla?"

"God! There was no pact, I swear it. They released me because I was too old and too ill."

"I have information which says otherwise. They kept your wife and daughter there. Was that not to ensure you kept a certain bargain?"

"I don't know what you mean."

"I think you do. You came here to spy. As a refugee your hatred of the new regime was unquestionable. As a noted scientist your services were much required. That much was easy. So they kept your family in order that you could buy their continued health by sending back details of the projects on which you worked."

Gottwald's dim face was a mask of pain and fear.

"Go away, madman! I was cleared by Security, anyone will tell you that. If you don't go I will call the patrol."

"Do," said Conyers evenly. "I'll provide you with a oneway ticket to the firing squad. Now stop trying to bluff me and start talking sense."

The elderly doctor collapsed back onto the bed.

"Very well, what do you want with me?"

"I want you to know just how you have been dealt with by the scorpions to whom you sold your soul. Your wife and daughter died within a month of your release from Brilla."

"You lie! I have letters from them."

"Clever forgeries to keep you on the hook."

"You can't prove what you say."

"I don't need to. You know it's true. I think you've known it for a long time."

For a long moment Gottwald said nothing, but buried his face in a pillow. Then:

"Perhaps it's better this way. At least they can suffer no more. Now tell me why you come to torment me at midnight. Tomorrow I will come with you to the police."

"I didn't come for that. I came to make you an offer."

"Have I not had enough of offers and ungodly alliances?"

Don't judge me too hastily. I offer you a chance to redeem your soul."

"What do you mean?"

"Since you have lost your allegiance to your late masters I want you to work with me. As you have been to so much trouble this afternoon to verify that I am not quite what I claim you will more easily understand what I intend to do."

"I know what you intend to do. I was looking for the reason why it had to be done."

"Then," said Conyers, "If you listen I will tell you."

September the ninth got off to a bad start. The dark hours were shattered by a storm, driving from the west, which burst directly overhead with a sound like the crack of doom. The snarling thunder and the blinding shafts of lightning sliding into the hills only emphasized the terrifying prospect of the day ahead.

At one o'clock Conyers slipped from his hut and made for a spot on the perimeter fence well clear of the guard gate. Here the barbed strands were well ravaged by rust and corrosion and it was but a few moments work for one well versed in the foibles of fences to gain

an unauthorized exit.

Crawling on the soaking ground until he was clear of the range of the perimeter lights he waited until a particularly brilliant flash illuminated his objective. Then he made off with a low shambling run out into the darkness of the night.

An hour later he re-entered Athlan by the same route. He closed the wire as best he could, swearing softly as a barb raked his knuckles, drawing blood. The venture had cost him more than he had reckoned. An ugly bruise was forming on his chest, and skin and trouser alike had been scraped from one knee. Nevertheless he had completed the first part of his task undiscovered, and that was sufficient compensation.

Climbing to the roof of the communications building was no happier task especially since the storm might have roused the night radio-operator from his usual half-eyed vigil. The slates were treacherous with moss and lubricated with rain. One false step would have precipitated his fall to the ground with, at best, a broken limb and half Fort Athlan in attendance. Also his fingers were numb with the cold and clumsy with continued immersion.

Some how he groped his way though the telephone wires, sorting pairs from memory and clipping prepared leads between certain circuits to establish new paths for a different purpose. A dry cell and a miniature headphone served to check the new connections and he was greatly relieved when the dry electric scratching in his ears signified that the job was done. Thankfully he crept quietly back to his hut for a hot shower and a few hours sleep.

Dawn brought a recession as the storm passed east, but the morning was marred by incessant rain and the sullen clouds brooding in the skies overhead. Fort Athlan woke with a sense of urgency; with hurried breakfasts and the roar of engines as the last of the military and civil staff prepared to decamp. As the last truck moved out across the desert Conyers emerged from his lair and took final stock of his surroundings.

Four men remained in the bounds of Athlan. Their nearest neighbours were speeding away to safety to Sao Bernard, one hundred and twenty miles away. Four men. Three to one with the devil in between them, thought Conyers. Perhaps the odds weren't so bad at that!

He called at the Director's office but Nye had already left. He finally caught up with him in the communications building where Nye was having an agitated radio-telephone conversation with Control at Sao Bernard.

"All correct?" asked Conyers at last.

"Like hell! The land line's gone dead."

"Won't affect the test, will it?"

"Not really. We were going to use the line on a direct link between the vault and Sao Bernard so that they could record our progress. This throws us back on a radio-link instead."

"That sounds fair enough."

Nye gave him a curious smile. "Suppose the radio goes too? We should be in a rather queer position if something goes wrong today."

"You've got the jumps," said Conyers. "The transmitter is a pair in tandem. You know the odds against complete failure on a set like that."

"Perhaps!" Nye got up and stared moodily from the window. "You know, Mike, I've an uneasy feeling about that land-line. The timing was a nice piece of coincidence. Off-hand I'd say somebody did a neat sabotage job on it. Somebody rather professional."

"Meaning me?"

"Frankly, yes. I've seen you philosophers at work before. I don't pretend to know how you operate or why, but I get the feeling that you're playing a deep game of your own."

"I have a contract," said Conyers, "which declares that I shall act as I see fit to mitigate the dangers of this project. If that necessitates a spot of wire cutting I shall cut every wire in the place if I choose. Remember that the survival specialists had supreme authority where a hazard is involved. I hereby declare a hazard."

Nye bit his lip in anger.

"Are you going to inform Sao Bernard?"

"No, that would only complicate the issue."

"As you wish. But why cut the wire?"

"It could be," said Conyers slowly, "that when you stand too close to a problem you can't see it in perspective anymore."

Nye turned to face him, bemused with a sudden idea.

"Mike, do you *know* what we're going to find today?"

"Not exactly. The bureau analysed the Houseman-Crane theorem some time ago. They came up with a pretty staggering idea as to what lay beyond the D-gate. I'm here just in case they're correct."

"Then what are you expecting?"

"I can't tell you. Suffice it to say that if the bureau prediction is correct then you are about to uncover something so potent that no bomb you can ever devise can contain it. Even the isolation of Fort Athlan can scarcely slow its impact on the world."

"Why didn't you say something before?"

"No point in it. As you yourself told me, you only work here. You don't accept the responsibility for your discoveries. The matter is already out of your hands."

"Very well," said Nye. "I respect your position. What do you want me to do?"

"Carry on as though this conversation had never existed."

Nye looked at him helplessly for a moment or two and then shrugged.

"I still don't understand you, Mike, but then I never did. If I didn't know you I'd say you were either a liar or just plain crazy. As it is I don't know what to think."

"Nobody's asking you to think. Remember, I didn't have to come down here and tell you this."

"Then why did you?"

"Because I think you're a nice quiet idiot who's going to come in for some very nasty shocks. I just wanted this to be one shock the less."

"That's a queer sort of comfort, I must say."

"I'm not here to offer comfort. I was sent here to ensure that your souped-up crystal set doesn't devastate half the continent. The way things are I wonder if I should have bothered."

"Why, what's the matter now?"

"Early morning news release. War in the Kashmir. Atomic war. Half a million poor devils blasted because 'I only work here' and another million dying because 'it's not my responsibility.' The idiot child has just turned the gun on his brother and we don't have enough decency left to compose an original epitaph!"

"Aren't you being a little hard on the scientists?"

"Man!" said Conyers. "Have you any idea of the I.Q. of the collective psychology of modern society?"

The war news was verified by the time the four had assembled in the bomb vault. The depression which had started with the storm deepened into a deadening resignation. Only Conyers, watching through quiet eyes, escaped the overwhelming sense of fatalism as the great doors sealed the vault from the world outside.

Nye took the communicator and called Sao Bernard, waited for acknowledgement, then fed in the holding signal which would stall the distant recorders until there was something worthwhile to note. Gottwald charged the necessary tapes into the computer console and signalled his readiness to start. Baring brought his vacuum pumps into chattering life and busied himself with valves and gauges.

The main board flooded with lights as the time controls switched on the supplies and modulators in the deserted galleries.

"Let it roll!" said Nye.

The main contactors fell home with a solid thud and the air grew loud with the surge of power. Then the computer came into play, and the slow dials on the console began their inexorable searching for the universe beyond.

Once they were thus committed the air of despondency grew thin and was replaced by a mounting tension and excitement. Nye broke the holding signal and radioed periodic reports to Sao Bernard, while Gottwald and Baring took turns to watch the oscillator board. Seven hours sped by without discernable effect save for the temperature steadily rising despite the efforts of the air-conditioning plant. Jackets were shed and tempers became a bit ragged at the edges.

Baring was hard-put to re-zero his instruments in the face of the rapid temperature rise, and Conyers stepped in to give him a hand.

"How much longer?"

Baring, the sweat glistening on his face, shrugged.

"Impossible to say. If the damn thing doesn't kick over soon we shall have to stop to let things cool off. Man! The heat does crazy things to some of these meters. Whoever designed this conditioning plant ought to be buried with it."

"I doubt if he foresaw anyone wanting to dissipate a hundred kilowatts of radio-heat down here," observed Conyers, "to say nothing of the magnets."

Scarcely had he spoken than Gottwald gave the warning signal.

"Power-factor dropping on numbers two and ten reactors."

"This is it," said Nye. "Better hold on to your hats."

Suddenly all was activity. The communicator was set live recording Nye's commentary against a background of chortling instrument signals. Baring deftly isolated the bomb from the vacuum system and took final pressure readings.

"Bomb ready for service."

Nye took the microphone to the oscillator board and discoursed wildly as he strove to trim the errant oscillators.

"Power within limits."

Then silence save for the hum of power and Gottwald reciting the purely arbitrary power-factor readings to provide an audible indication of progress.

"Zero point six three."

Baring glanced at Conyers. "One minute twenty seconds left."

"Time to start praying," said Conyers. "You know the odds."

"Zero point five seven."

"Evens," said Baring.

"No, a million to one against."

"Zero point three five."

Conyers, maintaining a philosophical calm, inserted three small keys into his locked switches.

"Zero point two nine."

All eyes save Gottwalds' turned towards the bomb, fear and hope mixed in unequal proportions.

"Zero point two two."

Conyers turned a key. *First safety off!*

"Zero point one six."

The meters fell with tantalizing restraint as some ill-understood phase advancement spread mysterious fingers around the reactor coils.

"Zero point zero nine."

Now the power was falling rapidly down some fantastic exponential curve—toward what?

"Zero point four . . . three . . . two . . ."

The power kicked wildly. The meters jumped and fell back to begin the slow rise to normality. Conyers reached and turned another switch. *Timers started. Next time it's for keeps!*

"We made it!" said Nye, his voice strained with relief. "We actually made a breakthrough."

Baring was already checking his instruments. "Pressure change nil. Short radiations group nil. Gravitic effects nil. Magnetic effects change one point—probable error. Long radiations group nil . . ."

Against the background recitation Nye called to Conyers.

"Nothing lethal there in small doses. You could be wong, you know."

But Conyers did not answer. How do you recognise what constitutes a survival hazard anyway? Is it a physical factor or is it a set of circumstances?

Then the real work began. With the final co-ordinates wrestled from the computer Nye dropped the sweep speed by a factor of ten. This was accomplished without giving any additional information. At ten to the minus-ninth seconds Baring reported a slight change in the order of vacuum in the bomb but the mass spectograph, pre-focused for hydrogen, failed to give positive evidence of this.

But with a further reduction in sweep speed the data began to come in fast. Excitement was running high despite the ever-rising temperature. Nye took off his shirt and wrestled with a slide rule, trying to extrapolate the information to form an advance picture of out-world conditions. Baring sweated like an overseer in hell, comparing and measuring, a handkerchief round his forehead to divert the moisture from his eyes.

When the gate duration was one microsecond feelings assumed a curious mixture of anticlimax and elation. No problem of power or complexity appeared to loom beyond the D-gate but there was something—and that something was beginning to make a practical kind of sense.

The heat was now so intense that Baring, who had already been forced to dispense with most of his transistorised equipment, was having difficulty in making measurements on even the less temperature-sensitive gear. Worse still he had to make difficult measurements and

adjustments in the face of increasing lassitude.

Stripped to the waist, Conyers waited, drinking in the sounds of the fantastic battle and intent on conserving his energy. When he judged the moment ripe he reached the console and tapped Gottwald on the shoulder. The mathematician nodded and fingered the controls carefully. The sweep was halted in the centre of its swing and locked against drift. Then Conyers fingers felt for the third key and turned it slowly in the switch. *The die was cast.*

"What the hell!" said Nye.

"I offer you," said Conyers, "the answer to the enigma. Look on it well, for it contains the power that mankind has no ability to resist. Against it we have no defence; no bomb, no tract of desert, no vault however sealed could hope to mitigate its consequences."

He moved to the bomb and stared with quiet fascination at the phenomena within. Behind him Baring pushed forward and looked, not fully comprehending, reading an entirely different meaning into the gentle shimmering circle of light. Nye pushed his way through, half agonised with the dawning truth. Then Gottwald, hypnotised by the incredible.

"So that's it!" said Nye.

"I don't understand," complained Baring.

But Conyers didn't answer. Nye had a revolver pointed directly at his heart.

"One move, philosopher, and I'll drop you where you stand. You're a neat operator, but you played this one a little too obviously. I don't quite know what you intended but I'm a little uneasy at the way you're running this show."

"You're also a little out of line," said Conyers, a trace of bitterness in his voice. "Don't you realise this project is under survival orders?"

"Yes," said Nye, "but it's only just occurred to me where the survival hazard was. It's up on the second gallery. At a guess I'd say it was a Rothwell Mark-four nuclear missile warhead, but it's been so modified that you'd never recognise it unless you knew what to look for. It had me puzzled because I didn't realise its significance."

"Very clever," said Conyers. "But you've left it a little late to alter matters now."

"I don't think I have. Harry, call up Sao Bernard and tell them we need some help in a heck of a hurry. About six men in a 'copter. Then get those door seals open as quick as you can."

Baring moved swiftly to do as he was bid. Soon he was back, his face white and strained.

"The door won't move. The automatic is dead and something's jamming the manual."

"Then tell Sao Bernard to send some engineers as well."

"Don't bother," said Conyers. "They couldn't make it in time. Big brother on the second gallery is going off in just forty-seven minutes time. You can't reach it and nothing you can do will stop it. This project is on its way out with a bang."

"Would it be too much to ask why?"

"Not really. I have a job to do and this was the quickest and cleanest way of doing it."

"What job, sabotage and murder?"

"No, survival! I'm the man who stops people giving guns to idiot children. I have to ensure that no word of what lies beyond the D-gate ever reaches the outside world."

"And for that you would kill the three of us and yourself?"

"For that I would kill a great many things."

"You're insane."

"Not so. Desperate perhaps, and a little afraid but then this is that sort of assignment."

"Then by what right do you take such decisions on yourself?"

Conyers smiled softly. "Have you any idea what that sort of prize could do to a world like ours? Power politics is a delicate balance of advantage over disadvantage. Conflicts are localized by the dictates of expediency. At the moment nobody has a decided edge over anybody. But what if somebody had? It's there, you know, beyond the bomb—waiting."

"So somebody wins? That somebody would be us."

"No so. It would trigger a conflict that nobody dare lose. There would be no winner. It wouldn't be that sort of a war. Don't you see, the hazard of the D-gate lies not in the bomb but is inherent in the nature of man himself."

"No," said Nye. "I won't buy that."

"Then you don't know man's capacity for self-destruction."

"There will be no destruction if it remains the undisputed secret of the nation."

"How naive can you get," said Conyers in disgust. "The philosophers knew what you were doing. Others knew it also. Even Gottwald is a spy."

For an instant the gun point wavered as Nye looked toward Gottwald for verification. The instant was sufficient. Conyers beat the gun from his hand and kicked it out of reach. Gottwald retrieved it and covered Nye and Baring from a safe distance.

"Is that true?" asked Nye, white with anger. "Is Gottwald a spy?"

"It was true, but he's changed sides in the interim. He didn't give them much information but certainly enough to arouse curiosity about the practical end of the Housemann-Crane paradox."

"Then at least he'll give them no clue as to our findings."

"Nor need he. While even the paradox remains somebody is going to try to solve it. Whoever forces the D-gate, the result will be the same. That's a risk I can't afford to take. The paradox has to be resolved for once and for all—I intend to manufacture an answer."

"A nuclear explosion?"

"Precisely. Gottwald informed his former confederates of today's tests; some of them are doubtless out there on the desert now, watching and waiting. I even gave them the chance to monitor the radio too, hence the broken land line. The whole world is watching Athlan for some sign of what we find. So I shall provide them with a sign—the appalling mushroom of man's crowning folly. I don't think many will attempt to follow in our footsteps."

"Now who's being naive?" said Nye. "Fall out can be analysed. The results will look decidedly phoney."

"Not this time. The warhead has been modified, remember. I am assured that nobody has ever seen a fall-out quite as dirty and with so many unlikely trace-elements as this one will provide."

Nye played his last card. "But you did forget one thing. The secret is already out. The communicator is live. This conversation is already on tape at Sao Bernard."

"No," said Conyers, "I didn't forget. I merely re-arranged the set

up. Your signal from here goes to the recorders in my hut. From there it goes back to the transmitter—but with a slight difference. It's running two hours late. The warhead is synchronized to explode when Gottwald's voice finishes the count-down. So far as Sao Bernard is concerned this conversation never existed."

"So there's no hope at all for us?"

Baring drew to Nye's side with something more than resignation in his eyes.

"Ask him," he said, "about the one chance in a million."

With awe-inspiring majesty the fireball rose out of the desert, spreading its lethal pall of heat and radiation far beyond the dead land where Athlan ceased to be.

The click of a switch brought the last moments of the inferno to a foreshortened end, and the screen went blank as the room lights flickered on. Seroia Passover, Senior Philosopher of the Bureau, looked at the projector, then at the silvery screen and finally at the analytical data spread on the dark table.

"There's no possible doubt," he said at last. "It was our device which blasted Athlan. That proves our original predictions were correct. I think this solves the paradox rather neatly."

The technician was puzzled.

"I still don't see, Seroia, how you could make such a prediction from the mere analysis of a set of figures."

"Nor could we do it. When we examined Nye's stressed-field method for the breakthrough the only thing we noted was the mutual dependency of the gravitic component on each side of the equation. Our maths boys decided that either an equal gravitational potential was available on the other side of the D-gate or else there was a serious flaw in the original theorem."

Sensing a tit-bit the technician selected a chair and sat down.

"You may remember," said Passover, "that about five years ago we lent three of our Tech. division boys to the Radar Research Station at Mathsai. R.R.S. had got a bit snarled up on a new accelerated radar system using a magnetic-flux scanning system which was not limited to the speed of light. Sometimes it worked and sometimes the results were damned improbable. Our boys sorted out the bugs and came back with

a curious by-product—the ability to bounce a radar beam off of a surface which didn't exist. Soon they were bouncing whole pictures off a terrain which didn't exist either."

"I bet that had you worried."

"It did indeed. The pictures were of a very beautiful earth-type world with plenty of vegetation and some small animal life. It wasn't until we heard of the Athlan project that we began to get the faintest idea of where the pictures did come from. Then we really had a dilemma. We couldn't reveal what we knew and we couldn't ask for the Athlan project to be abandoned without giving the game away. Finally we gave it to Mike Conyers as a survival problem."

"I'm a bit worried," said the technician. "I belong to a democracy and I'm just gullible enough to believe in it. Blasting a big project like Athlan doesn't quite equate with batting for the home team."

"Doesn't it?" Passover leaned back in his chair. "You know as well as I that if that information had got out of Athlan it's a pretty fair chance that by now a stick of cobalt bombs would have been laid right down the centre of the British Isles. The world next door is an advantage that nobody dare miss and nobody can afford to allow to another. Now go and look out of the window and tell me which side you're batting for."

"I see what you mean. I guess Mike was a patriot too."

"Perhaps! Let's just say that philosophers have a larger allegiance."

The technician collected the analytical data from the table and sorted it into order.

"Oh! there was one other detail. The sound laboratory ran an analysis on the transmissions from Fort Athlan. They think there may have been an earlier fault in the communications system. Part of the holding signal appears to have been produced by a different generator."

Passover was on his feet in an instant.

"For what duration?"

"About two hours, I think."

"Then," said Passover, "it's just possible that Conyers did get out!"

"I don't see how. He may have delayed the transmissions but he would never have left the vault."

"True, but if Mike delayed the transmission he must have had an

equivalent time between the initial breakthrough and the time of the blast."

"That still doesn't give him a way out."

"I think it does," said Passover slowly. "It's been staring at us all the time. Mike would have had no necessity to blast the project unless the data on the world next door suggested at least the superficial appearance of habitability."

"You mean . . ."

"That he went through the D-gate. He may even have taken the others with him."

The technician was thoughtful. "You could be right, at that. Assuming it's true how are we going to get him out again?"

"We can't, because if he comes back from the dead we have destroyed our own answer to the paradox."

"But you can't leave four men alone on an alien world and expect them to survive. Every single action would constitute a survival hazard. The problems of food, shelter and defense alone might well prove insuperable, to say nothing of the biological hazards."

"It would take us a year," said Passover, "to duplicate the D-gate. Roughly how would you estimate the odds against their survival for that period?"

The technician rubbed his brow.

"It's the classic survival problem, I'm afraid. To survive you manipulate known advantage against known or foreseen hazards. What then happens when both your advantage and your hazards are completely unknown qualities? The most ambitious survival rating would not be higher than one chance in a million."

"Very well," said Passover, "start building. I give you twelve months from this day to build me a gateway to the world next door."

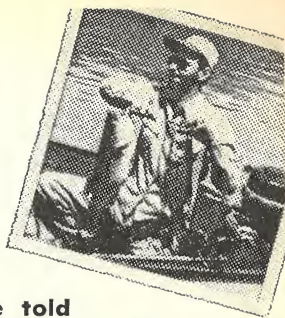
"Then you are going to get him out?"

"No," said Passover softly, "If he survives those odds I've an even bigger job awaiting him."

"Such as?"

"Setting up the nucleus of a new civilisation based on sound philosophical tenets. A new conception of man and a brand new world to hold him. I think that should work out rather well. It's the answer to our greatest survival problem."

Bass Fishermen will Say I'm Crazy ... until they try my method!



But, after an honest trial, if you're at all like the other men to whom I've told my strange plan, you'll guard it with your last breath.

Don't jump at conclusions. I'm not a manufacturer of any fancy new lure. I have no reels or lines to sell. I'm a professional man and make a good living in my profession. But my all-absorbing hobby is fishing. And, quite by accident, I've discovered how to go to waters that most fishermen say are fished out and come in with a good catch of the biggest bass that you ever saw. The savage old bass that got so big, because they were "wise" to every ordinary way of fishing.

This METHOD is NOT spinning, trolling, casting, fly fishing, trot line fishing, set line fishing, hand line fishing, live bait fishing, jugging, netting, trapping, or seining. No live bait or prepared bait is used. You can carry all of the equipment you need in one hand.

The whole method can be learned in twenty minutes — twenty minutes of fascinating reading. All the extra equipment you need, you can buy locally at a cost of less than a dollar. Yet with it, you can come in after an hour or two of the greatest excitement of your life, with a stringer full. Not one or two miserable 12 or 14 inch over-sized keepers — but five or six real beauties with real poundage behind them. The kind that don't need a word of explanation of the professional skill of the man who caught them. Absolutely legal, too — in every state.

This amazing method was developed by a little group of professional fishermen. Though they were public guides, they

rarely divulged their method to their patrons. They used it only when fishing for their own tables. It is possible that no man on your waters has ever **seen it**, ever **heard of it**, or ever **used it**. And when you have given it the first trial, you will be as closed-mouthed as a man who has suddenly discovered a gold mine. Because with this method you can fish within a hundred feet of the best fishermen in the country and pull in ferocious big ones while they come home empty handed. No special skill is required. The method is just as deadly in the hands of a novice as in the hands of an old timer. My method will be disclosed only to those men in each area who will give me their word of honor not to give the method to anyone else.

Send me your name. Let me tell you how you can try out this deadly method of bringing in big bass from your local waters. Let me tell you why I let you try out my unusual method for the whole fishing season without risking a penny of your money. Send your name for details of my money-back trial offer. There is no charge for this information, now or at any other time. Just your name is all I need. But I guarantee that the information I send you will make you a complete skeptic — until you decide to try my method! And then, your own catches will fill you with disbelief. Send your name, today. This will be fun.

ERIC A. FARE, Highland Park 33, Ill.

ERIC A. FARE, Highland Park 33, Illinois

Dear Mr. Fare: Send me complete information without any charge and without the slightest obligation. Tell me how I can learn your method of catching big bass from waters many say are "fished out," even when the old timers are reporting "No Luck."

Name.....

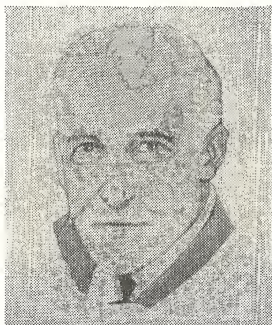
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City.....Zone.....State.....

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Only 15 Minutes a Day

Nor is there very much to learn. In Mr. Cody's years of experimenting he brought to light some highly astonishing facts about English.

Similarly, Mr. Cody proved that there were no more than one dozen fundamental principles of punctuation. If we mastered these principles there would be no bugbear of punctuation to handicap us in our writing.

Finally, he discovered that twenty-five typical errors in grammar constitute nine-tenths of our everyday mistakes. When one has learned to avoid these twenty-five pitfalls, how readily one can obtain that facility of speech denoting a person of breeding and education!

When the study of English is made so simple it becomes clear that progress can be made in a very short time. *No more than fifteen minutes a day is required.* Fifteen minutes, not of study, but of fascinating practice! Students of Mr. Cody's method do their work in any spare moment they can snatch. They do it riding to work, or at home. They take fifteen minutes from time usually spent in profitless reading or amusement. The results really are phenomenal.

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For instance, statistics show that a list of sixty-nine words (with their repetitions) make up *more than half of all our speech and letter writing.*

Obviously, if one could learn to spell, use, and pronounce these words correctly, one would go far toward eliminating incorrect spelling and pronunciation.